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TRANSACTIONS & STUDIES
of
The College of Physicians of Philadelphia

Volume 38
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Number 1
(July 1970)

Current Issues Besetting American Medicine[1]

By JOHN H. KNOWLES, M.D.[2]

I am pleased to be the 98th Mary Scott Newbold Lecturer. I do know something of your history, and was happy to hear it again this evening, of The College of Physicians of Philadelphia, which, as I understand it, having been founded in 1787, is the oldest and certainly one of the most distinguished colleges or collections of physicians in this country. I think the venerable nature of this hall and the various accoutrements around this establishment attest to its respect for the past and its hope for the future.

I am always interested in introductions. They remind me of the story of the retirement of George Catlett Marshall, a General of the Army at that particular time, I believe, having been Secretary of State. The toastmaster was Ambassador Joseph C. Grew, who was seated that particular evening at the head table with General and Mrs. Dwight David Eisenhower. Ambassador Grew got up and said, "This evening, ladies and gentlemen, we have a very distinguished American with us, one we are all gathered here to honor, a distinguished American statesman, architect of the Marshall Plan. There is nothing that a grateful citizenry would not do for this most distinguished American. But," he said, "General Marshall is a man of simple tastes and all he wants to do is to retire gracefully to his farm in Virginia and spend his remaining days quietly with Mrs. Eisenhower." Ambassador Grew, recognizing his error, immediately repaired hastily to his seat and penned a little note and sent it down to the end of the table to Mrs. Eisenhower, and in that note, he said, "My apologies to the General." Mrs. Eisenhower, not to be outdone—this is the only story I know that you can usually draw at least three laughs out of—received the note and sent it back to Ambassador Grew with the very simple question, "Which General?" So, I appreciate your introduction very much, Dr. Blumstein.

I seem to have achieved some form of negative notoriety by virtue of having been apparently Mr. Finch's choice to be the Assistant Secretary of Health and Scientific Affairs. Having lived for some six months thinking it was conceivable I might ultimately be that, I was rewarded by achieving ultimate fame by being mentioned on Rowan and Martin's television show. I don't know if any of you here heard it; I didn't have the pleasure, but the next day about fifteen people around

[1] Mary Scott Newbold Lecture XCVIII, The College of Physicians of Philadelphia, 4 February 1970, transcribed from a tape recording.

[2] General Director, The Massachusetts General Hospital, Boston, Massachusetts 02114.

the country called me up and said that Rowan had just said to Martin last night, "Say, you know that fellow Finch? If he put Knowles's name in on a Wednesday afternoon, he would have gone through like greased lightning, because all those docs in the AMA would have been out playing golf." The only thing that Rowan and Martin didn't know was that I would have been out there too!

I hope to focus on some of the issues that are today besetting American medicine. Santayana said, "He who knows no history is doomed to relive it." In fact, I am now trying to write a book on some of these issues. As long as I have achieved such a peculiar form of notoriety, I might as well try to influence the public. Amongst other things, I have reviewed as closely as I could the history of American medicine since the turn of this century, which is not easy to do, but, on the other hand, it is not too difficult. If one looks at the report of Ray Lyman Wilbur, the Committee on the Cost of Medical Care, which was filed in 1932 after some five years of hard work (Ray Lyman Wilbur was Hoover's Secretary of the Interior, was a President of the American Medical Association, and ultimately the President of Stanford), if you read that report today, you could change the date and leave the same words and you would come up with the same things that reports are saying today, much of the present constructive criticism of American medicine. Change is very slow in all professions. All of us by nature are conservative; we can't deny it, nor do we necessarily wish to deny it, but history does repeat itself and I think that much of what I will say tonight has been said many times before. Perhaps I can say it in a slightly different way and call attention to what I think is, in fact, a second or third watershed issue in the history of this country, if not medicine itself. I am of the carefully considered opinion, not being a historian, that we have faced watersheds of a critical nature in the history of this country two times, and we have now reached the third one, and I think they occur in 40-year cycles. I hope there aren't any scholarly historians here. If there are, they will probably hold their heads by the time I get through with this theory.

In 1890, we had the first major depression in this country and that decade from the 1890's to the 1900's saw the growth of the muckrakers with their successful intervention on behalf of the steadily expanding, now urban population. It saw the first really massive intrusion of Federal government into the lives of Americans. The Anti-Trust Act, the Interstate Commerce Act, was legislated in the late 1880's; the Food and Drug Act, the almost direct result of Upton Sinclair's exposure of the Chicago meat packers, was enacted in 1906; the Children's Bureau, founded in 1912, the first fact-finding arm of government, ultimately resulted in the Shepherd-Towner Act in 1921. We had the first major depression in the 1890's when Jacob Coxe led his Army of the Unemployed on Washington and set up his tents in almost the same place that Martin Luther King set up his with his army some 60 or 70 years later. Things seemed to get back on track at that point. Social reform was fast in coming, as reflected by the growth of voluntary institutions, for example; women, such as Florence Kelly or Jane Addams, led the way. Things seemed to straighten out. We recovered from the depression. We were now becoming very quickly a steadily expanding urban society, and along came 1930, 40 years later, and the second major critical period came to this country. We had another depression. Nobody likes the fact that we had another depression then, but whether you like it or not, we then involved ourselves in essentially a 40-year cycle which has now

come to a close. To deal in simple, I hope not too simple absolutes, we have gone through a cycle of 40 years of expanding problems with the people of this country looking increasingly to central governmental intervention for the solution of the problems.

Now here we are in 1970. We know that over the last ten years our total expenditures on health in this country have doubled, and they have now reached an all-time high of about 62 billion dollars this coming year, which boils down to such figures as 600 dollars per capita for everyone over 65, about 200 dollars for everybody under 65. This represents 6.7% of the gross national product, whereas it was 5% or 4.5% ten or fifteen years ago. We spend now more than any single country in the world on health services. Therefore, if the costs continue to increase (and in the last three years hospital costs have increased anywhere from 15 to 20% each year, with a total increase of almost 50% in the last three years, and physicians' fees have increased between 6 to 8% each year for the last three years), somebody is going to start asking questions. They've got to ask the questions, and I've got to ask them too, because I am also a taxpayer, and I don't like it too much when I find that somebody has been making 180,000 dollars down in Texas or when I find that a hospital that isn't even a teaching hospital has per day costs that are higher than they are at the Massachusetts General. It bothers me because the money comes out of me as well as you.

Now, then, if you look at this steadily increasing amount of money we're spending on health in this country, you want to have certain figures of what the state of the health of the people in this country is. The last time I spoke on this subject I was accused of being a pessimist. I am not a pessimist. If I were a pessimist, I wouldn't be here tonight, and I certainly wouldn't be in the job I'm in, because a pessimist couldn't conceivably be sitting on top of a 70-million-dollar budget and the highest cost commodity in American Society today with 6000 employees and the unions coming in every window and every entry to the hospital, and with everybody and his brother convinced that he can do it better than I can. (He may be right, but none of them has offered to try it yet.) If I wasn't an optimist, I certainly wouldn't be doing what I'm doing. I am optimistic, but I think there are major questions to be asked and major answers which only we in the profession can give adequately to the people in this country.

If we look at our health statistics, we look at some pretty dispiriting situations. There are definite reasons why we should go into detail as to why these things occur. We know that we rank anywhere from 10th to 20th among the developed countries of this world in adult longevity of White males, White females, Black males and Black females; we do not rank at the head of the list. That's a gross measure of health. You may ask what we, as physicians, have to do with that. Maybe it's because we eat too much, and we don't get enough exercise, etc. Well, we, as physicians, if we are interested in health, must be interested in trying to change a system which allows longevity to be so lousy in this country. If we look at other dismal statistics, we find, for example, that in this country the highest cause of death in college students is suicide; we find that 25,000 people commit suicide each year in this country, and for every one that is successful, I am told there is a minimum of ten behind each one that is not successful, so there are about a quarter million people who are at least trying to commit suicide a year in this country. We have four and a half to six million alcoholics in a population of 200 million people. Many think that is a conservative estimate. Would any of you believe now many illegitimate

children are born in this country a year? A staggering number—300,000 children are born illegitimately. Certainly an illegitimate child has less of an opportunity to grow up and not be on the welfare rolls some day than the child of a stable family. Now we also know that there are some 5.5 million women bordering on poverty of child-bearing age, who, in fact (contrary to what we might want to believe in our self-fulfilling prophesies about the poor people, that all they do is want to lie around and have children, and don't worry about families, and so on), want access to family planning information and do not want to have their ten children, despite the fact that down South if you had another illegitimate child you could make more per year than you could picking cotton. And so, again, if we broaden this thing out, we know that the welfare laws in this country, which grew up as an attempt to dissolve the indigent family and to reward those who stayed on welfare rather than getting work and so on, must be revised. We know that high time has finally come and, indeed, the present administration is trying to revise the welfare laws, but I am told that Congress is now dragging its feet on that subject.

Now, if we go from there, what is the fourth largest cause of death in the United States? The fourth largest cause is accidents, of all things. Over 50,000 people are killed each year by that great American weapon, the automobile; 25,000 are killed in fires, and another 25,000 from miscellaneous causes. Maybe 105 or 110 thousand people die in this country a year from accidents.

Now, if we look at what one of the Black Panthers said, "that violence is as American as cherry pie," indeed, we find that our homicide rate in this country is 6 per 100,000, and that the next closest country is, I think, Australia at 2 or 2.5 per 100,000. This is a startling figure for a country which somehow can't bring itself to legislate any kind of gun law, and where one of the easiest things to do apparently is either run into your adversary with a car or get the family firearms out.

Now these things are all, to my mind, part of the health situation. When I arrived in Philadelphia this afternoon, I circled this great fair city and it's no longer a fair city. I can hardly see it, and when I get on the ground I can smell sulfur. I know I smell sulfur. My throat started to dry out, my sinuses started to clog up, my eyes got a little funny, and I started to itch all over, and then as I drive into the middle of the fair city, the transportation system at quarter to four in the afternoon was such that we sat in line for at least a half an hour to get three blocks. All of this results in a tremendous feeling of dis-ease on the part of a steadily expanding population which somehow cannot travel that circuitous route to the Promised Land as defined in the Constitution and the Bill of Rights. I think we're in trouble in this country right now as of 1970, and I think that we're in a slack tide period where the pendulum is beginning to swing from ultra- or just plain liberalism back to a middle, or conservative, or ultra-conservative stand. The truth probably lies somewhere in between, in a relatively pragmatic course which says that you identify problems and move on them, and those problems are as much problems of pollution and environmental control and the hazards of an incredible, inexorable expansion of population in this country, as well as around the world. I think it's high time that medical education included public health education. Medical education has studiously neglected all public health work for certain historical errors, starting in London in the 1850's when the State and the schools separated public health interests from curative scientific medicine, a trend which finally hit this country in 1910, following the A.M.A.'s stimulus to

revise and the profession's own responsible stimulus to do away with proprietarianism and establish medicine as a full university discipline. Bear it in mind that it was the A.M.A. which stimulated the Carnegie Foundation to get Flexner to do his report, but before Flexner compiled the report, the proprietary schools began closing down as a result of the muckraking articles which appeared in the *Journal of the American Medical Association.* There have been some golden years in the A.M.A. for those of you who delight in detracting from the glories of organized medicine. There is plenty of good that they have done in the public interest, although I think that some of their intransigent mistakes over the last 20 or 30 years have perhaps clouded the issue in its total circumference.

As far as I know, in medical education today there are no lectures on public health, the organization of health services, the cost of health services, the evaluation of quality, the distribution, the accessibility, the different methods of delivering services, and so on. To my knowledge, this is non-existent to this very day in most of the medical schools in this country. There certainly is nothing about the hazards of the inexorable expansion of population or the physician's role in the larger issues of the total health of the community. Physicians collectively have as much political and economic power as any group in this country, if not more, and when the A.M.A. and AMPAC can spend as much as five million dollars in a single Congressional campaign, and when the physician, and rightfully so, has the revered and respected position in the community he does, I think it is time that we get out from the protection of the idiot savant and the lack of moral commitment that all of us as experts are allowed to indulge in by virtue of our being expert. Too many physicians have the attitude that all we have to do as physicians is to take care of our individual patients and the rest of the world can be polluted or over-populated, or we can have lousy housing, or lousy nutrition, or too many illegitimate births and no family planning, because that isn't our problem. In fact, that is increasingly our problem and it is rightfully a problem of medicine as much as any other segment of the community, and certainly it should be our problem more than it should be our political leaders' problem, and we should be the leaders of the resolution of those issues and not leave it to beleaguered, evanescent political forces.

Now, when we look at the costs and then look at the benefits, we find that medicine, for some reason or other, has continued to focus largely on the development of those functions which have the lowest benefit-to-cost ratio. In fact, organized medicine from time to time has actively resisted those things which had the highest benefit-to-cost ratio, such as smallpox immunization or free venereal disease clinics in inner-city areas, and what have you. And I think that this was wrong, and I think historically it has been shown to be wrong.

Now, on top of that, there is the present cry today that we should have health insurance for one and all in this country, and it should be compulsory. I think ultimately there is no question that it is going to happen and the sooner it happens, probably the better, but it should not happen until we have shown our wisdom in structuring present insurance plans in this country whether they be Medicaid, Medicare, or the Blue Cross and the Blue Shield. This subject brings me to the second part of this polemic, and that is that consumer interests have generally been neglected and the producers' interests have been served much better in recent times than the consumer interests in this country. I honestly believe it. I think that if you look at insurance com-

panies, public or private, government or private insurance companies, you will see that insurance has been evolved to keep hospitals happy and has represented hospital interests as heavily, and more heavily, than it has the consumer's interests, the people who buy the insurance. That's an awful thing for a hospital director to say, and when I get back there tomorrow they'll be right down in my office giving it to me in no uncertain terms, but I've invited them to. I think the Blue Shield in certain ways in certain states under the complete control of the medical profession has not built in certain quality controls in the public interest which would insure the subscribers that, in fact, we are doing a lot of things they don't even know we are doing. I think Medicaid was a free license for us all to steal, hunt, and do everything else that we wanted to, and there is only one thing that it has done which is good, which is to keep physicians in inner city areas where now at least they can make a decent living and try to take care of the poor people whom they were progressively less able to take care of, because they couldn't live there, grow up there, or even make a decent income there. Medicare was the first piece of legislation, to my knowledge, that even built in the necessity of the utilization review or any furtive glance at quality controls, and as much as you all might not like it, all I can tell you is that at our hospital our staff has implemented the utilization review committee and we have improved our utilization and our quality in measurable ways by virtue of doing this, and so when I hear people tell me that it is a lousy thing to do, or it doesn't work, then I think that there is something wrong with them, and I think, *de facto,* utilization review in this country has been somewhat of a furtive exercise to date, and I think we are going to see more people asking these questions.

Now another thing that brings goose pimples to everybody is when I say that we in medicine should no longer plead for a free market economy and a *laissez faire* economy. We in organized medicine, and I am a member of organized medicine, have said quite baldly from time to time over the last 50 years that we believe in capitalism and a free market, *laissez faire* economy. I do not think we should continue to say that in medicine, because I think we are becoming increasingly suspect every time we say it and because I do not believe that the tenets of a capitalistic economy and a free market economy or *laissez faire* economy can conceivably apply to the problems of medical care. The free market economy has, in fact, not stimulated high benefit-to-cost ratio developments in medicine; it has not solved the problems of distribution accessibility, manpower, and a multiplicity of other issues. It has, for a certain segment of the population, done very well, to the neglect of a steadily expanding other segment of the population. A free market economy is predicated on the fact, and I believe in it for most things but medicine, that an enlightened consumer, if he is educated, will be able to shop around and buy his goods and he will be able to find the highest quality for the least cost. The producers, on the other hand, compete with each other to make a better mouse trap and a better product at a lesser cost, so that consumers and producers, when they are working well in a free market economy (and this is why we don't want wage and price controls in this country, one reasons historically), when they are both doing their job right—educated, enlightened consumers and competitive producers—the consumers win and the producers win, and we do a much better job, and in between you have a good product at a good price. Certainly this country in many areas has done it better than any other country in the world, and I

believe in such a free market economy and I am a firm proponent of it.

Now when it comes to a free market economy and *laissez faire* in medicine, the situation breaks down. In the first place, the producers are not allowed to compete with each other. Let's say that I advertise in the Philadelphia papers that we are going to have a special on gallbladders this week at the Massachusetts General Hospital, and that we are going to give a special rate. We are going to offer a 5-day stay and the best surgeons in the country to do the operation for a special rate of $200 a gallbladder. I think we would have them lined up from here to California whether they needed it or not. But we cannot compete with each other; indeed, it is unethical to compete with each other. One of the original reasons that organized medicine was against group practices and pre-paid group practices was the fear that they would start competing with each other and say, "Look, our quality is better than that group across town there. We're going to do it for less cost and give higher quality." Now we're not supposed to compete with each other, so we don't compete with each other, so right away producers that are not in competition with each other are not necessarily working to the advantage of the consumer, and in a free market economy when the demand is rising and skyrocketing, and the supply is inadequate to the demand, you don't have to be an economist to know what's going to happen to the prices, and, in fact, that is what is happening to the prices. I say this for hospitals, too. Voluntary hospitals and other institutional forms of care have not been in competition with each other, so we right away fall apart on *laissez faire* economy. The producers are not allowed to compete with each other. Therefore, I do not think that anybody who is educated and looks at the tenets of *laissez faire* and a free market economy is going to listen to us forever without getting a little suspicious that what we are, in fact, is a monopoly that controls the supply and the demand and the prices. I don't think we can support our position, ladies and gentlemen. I hate to say it, but that's what I keep reading as economists increasingly keep looking at us. Until recent times, the economist never got anywhere near us; as a matter of fact, most other intellectual disciplines didn't dare. And most of the economists who look at us now are a little bit fuzzy about what they are saying, but not all that fuzzy, and most of them will tell you that we have more the characteristics of a monopoly than we do a competitive free market system. So I think that as the costs rise, people are going to look and try to measure benefits and they are going to ask us very difficult questions, and we have got to be in a position to answer them.

While I'm on the subject of cost, I want to recommend that all of us in the 1970's get that short annual review of the budget of the United States Government, which we can get by writing to the Bureau of the Budget. It will show you how much we spend on education vs. the Defense Department vs. the supersonic airliner or the Merchant Marine, and it will show you how much we spend on research in medicine in this country today. With 60 billion dollars going into the total health field in this country, we spend only about a billion and a half dollars, a little under 3%, on research, and of that billion and a half we spend about 20 million dollars to research the system and do social research on the system. That is incredible to me as we simultaneously debate for three months the merits of whether or not we should build a supersonic airliner. Now, I don't blame the students for getting a little upset these days; I do too, and so do my children. The final development cost of the supersonic airliner will be in the billions of dollars, ultimately, and I

got the Congressional Record to find out why we are building this thing. Now bear in mind that we are in the age of the environment and the house, "*oikos,*" the Greek for ecology. The new word "pollution" has got lots of appeal. And at the same time we vote this amount of money to build a supersonic airliner which will get us from here to London in about four hours quicker than we can do it now. Why do any of us want to get there four hours quicker than we do now? Nobody has answered that yet. Secondly, we will be flying in the stratosphere where we will probably pollute and give rise to various particles in that stratum. We have no idea what that pollution is going to do, but we have unlimited faith in our scientific and technological capacity to solve the problem, whatever it may be, another fallacy that we are now in. So we spend money on the supersonic airliner. We are told that it will not go over any land areas because if it did and it went over this building right now, all of us would be lined up from here to Washington either protesting to our political representatives or trying to get appointments with oto-rhino-laryngologists because our ear drums would all be gone. The major reason for the supersonic airliner, it seemed to me after reading the Congressional Record, was that it would improve our balance of payments. Students and people at large, all of us are becoming worried about how we are going to rationalize and set priorities and allocate our resources in this country. How are we going to do it, when on the one hand we spend six months debating 10 billion dollars for the ABM system, which is as much a social decision as it is a scientific one, or we approve the supersonic airliner which continues to cause pollution while we simultaneously are declaring that the major crisis today is the polluted environment. You all know the hot house effect of increasing amounts of CO_2 which lets the sun in but doesn't let it out, and if it continues to increase in our world, will melt the ice cap and we will all meet next time with our pants rolled up and standing in three feet of water! Or, you all know that over the last 10 years the temperature on the earth's surface is, in fact, falling, because, it is thought, particles polluting the air reflect the sun and therefore the earth's surface gets a little cooler, so that we may be skating into the halls next week! Now an awful lot has been written about this—every major magazine has stressed it—and yet here we are right now cutting back on certain elements of health, compounding our problems, as we allocate further sums of money to the very same things that have us in a state of distress at the present time. So we look at the system and we are disturbed about it.

Now, the next thing that we notice is that, despite all this money we spend, we have dismal health statistics and we also have some 45 million people in a population of 200 million who qualify as poor. That's a lot of people in a very powerful, affluent country. A couple of weeks ago I picked up *The New York Times* and there was a picture of migrant farmers in Modesto, California, and it said that they worked two or three months a year during the harvesting peaks in the San Joachin Valley, one of the richest agricultural lands in the world, and then they are on welfare for 8 or 9 months of the year, and that there are about ten thousand of these people. Now right across from Modesto is a great big bin, and it has surplus food in it, and the same senators who come through there and talk about that surplus food are also finding out about malnutrition, and we are told that there are ten or fifteen million people who are starving in this country. Now if I were a grape picker, and I had a couple of kids and they were hungry, and I was on welfare, and I couldn't make it go and there

was no job for me, and I saw a lot of surplus food right across the street from me, I think I might be disturbed, and I think I might, out of desperation, decide to confront that situation, and that's another word for revolution vs. evolution. Now, I don't want to sound like a Socialist, and I'm not, and I'm not a Communist. I'm just a practical man, and I say that there are major issues in this country today and I say that, as physicians, there is nobody, collectively or individually, in a better position to affect this system and to right some of these injustices or inequities, if we are honest with ourselves and are true to our honorable calling to prevent disease and improve health. I don't see how we can tolerate for very long 45 million people who are in many instances bereft of health services of even the most primitive type, due to inaccessibility amongst other things. We do know certain facts in medicine. We do know that accessible health centers on a relatively simple basis in inner-city areas are and will be used by people, and can prevent disease, can reduce the use of high cost hospitalization, can be fruitful work for physicians. I think more medical students today are becoming interested in this type of work, and I think the pendulum is swinging back to where it should never have swung away from in the first place, which is the fact that the full practice of medicine is as honorable and stimulating and intellectually and emotionally satisfying as any of the roles available to us in medicine. There are people, you see, who blame the A.M.A. for sponsoring Flexner to get us all into the university and get the flag of science up, who say it's the A.M.A.'s fault because they did that, but at the same time we're glad they did it, but now we're not glad they did it because everybody seems to be following the leader into research and it has become a kind of a dismal pursuit to practice medicine and to teach it. I think the pendulum is swinging back to that, and I think we are in a drastic state as it relates to physician manpower in this country today.

There are other issues besides cost and equality of access, and another one is the question of quality of services. For some reason or other, we have been very loathe in our profession to allow consumers anywhere near us, although Aristotle said, and I would agree with him, that the guest will judge better of the feast than the cook. I think we have a right as professionals and experts to tell the people what, in fact, is best for them and how it is going to be carried out, but I think we should have a little more echo from the people who are getting these services and try to decide what it is that they want that frustrates them. And we might find that they aren't so beastly, and I am sure that they will find out that we aren't such bad people either. But the way we communicate with each other through the press these days and through the television tube, you would think that the whole world was on fire and none of us has benevolent or even good intentions at this point. Now, interestingly enough to me, the psychiatrists are the only ones—very smart people those psychiatrists—who have enlisted the help of consumer groups. I was at a dinner last night in Boston and it is the only dinner I have ever been to where a United States Senator, the Governor, the Speaker of the House, the Speaker of the State Senate, and the Commissioner of Mental Health, all gave speeches, and about half the State Legislature was in the crowd. An incredible, incredible turnout. Well, psychiatrists have similar groups through every state; they have these citizens' advisory commissions on mental health; they have a very powerful national lobby down in Washington. In fact, psychiatry over the last 10 to 15 years, in terms of the resolution of its manpower shortage, particularly in psychiatric social workers, psychologists, and

so on, has captured the largest share of the short manpower market of any special interest or group in the field of medicine. Furthermore, they have got plenty of political muscle, and they work very well with the consumer. The consumer group asks them simple questions, and they expect logical answers from the experts. They don't tell them what to do, but they talk directly and work well with them on a local regional basis, and I don't see why we are so loath as professionals, to descend and open our charismatic robes to well-intentioned consumer groups who will work with us and not against us to try to improve the system of medical care. Bear in mind, as we try to re-systematize the system in this country, attention has to be paid to the middle classes who are the disaffected group in this country today. The great American middle class are disaffected not only from the standpoint of government intervention and government spending; they are beginning to wonder about us, particularly when we display on the front pages our equivalent of the moon shot, and the medical equivalent of the moon shot is the heart transplant, and there are other variations on this theme. Now I can be ridden out of almost any town in the United States, particularly academic centers, when I make the statement that I really don't think that our resources should be deployed to an issue such as the heart transplant, which I promise you as you look at the past, present and future of the world and of this country, we are not going to be doing as a major public health contribution to the health of the American people. It just isn't going to be, not until we can get that sulfur dioxide out of the air and do something about all those guns and automobiles and suicides and cancer and people smoking, and all those little goodies that aren't as much fun and an awful lot harder than making that trip to the moon. That trip to the moon was apparently, as I understand it, one of the easiest things this country has ever done. It was no problem at all. And now we use that as an example of how we can solve anything here. Well, it has taken us about fifteen years to even discover the word "pollution." I sit on the Public Health Council of the State of Massachusetts, and I can tell you that the big power plants are getting their muscles flexed but good on our little local moon shot of trying to get the air detoxified. When we go up to New Hampshire to go skiing on a week-end, my wife and I wonder why we feel so well. It's not psychological, because when we come back to town we understand why: the sinuses clog up; you can't hear very well; there's dust and dirt all over the place, and it really is a pretty dismal way to spend one's existence. Yet this is the bed we've made, and like the cuckoo bird, we are busily fouling it as we transplant the hearts and take the trip to the moon. I will grant you that if the moon's atmosphere were such that we could live on it, it would all have been worth-while, because that would have solved the population problem, but we've already polluted a good part of the moon by all the garbage we have left up there, which is a wonderful little poetic form of justice, except that the garbage cost about five million dollars that we left on the moon, wonderful cameras and so on.

Now I am going to talk just briefly for a minute about the Federal role in health, because quite clearly, when the Federal role is expanded from a negligible amount —5 to 10% of the total spent on health in this country—to 35 or 40% of the total, the Federal role has to be studied carefully, and we as citizens of this country are the ones to determine what it should and should not be. Again, I do feel that we have got to, at some point in this country, all try to get together and agree on what sort of a health policy is best for this country. How are we going to set our

priorities, on which types of pursuits should more emphasis be placed to the exclusion of others? Our proportion of the gross national product is not infinite. It is finite, although to see our steady encroachment on it, one might think that we can live happily until we get to about 50% of it. I really don't think that is true. We have said that health is a birthright along with certain other inalienable rights of the people who are born as citizens of this country, and I say that it's time to either stop the hypocrisy or to try to make it that and determine what best way we will reach that situation. We are far from it at this time. I think we have got to equate the cost of services, whether we like it or not, with the benefit from those services. I think that we must make the decision that health is, in fact, a birthright. I wish that someday in this country we would make long-range decisions as well as short-range decisions. The short-range decision says that the poor people are lazy and this, that and the other thing, and, "Look at all those illegitimate kids," and, "My god, get 'em to work and stop all this foolishness." The long-range decision says that, in fact, most of the poor people who can work, want to work, and I believe that they do. First of all, I have met very few poeple in this country or around the world who did not want to work. Most men want to be busy and active and working. I think that's true of the poor as well as the rich. At least, Governor Rockefeller is working, whether you agree with him or not! Now, this long-range view would say, "If we can do something about family planning and some segment of the 300,000 illegitimate children, and about the revision of the welfare laws which will reward people for working and not penalize them, then 20 years from now we will have reduced welfare rolls and have less people lying around on welfare cushions." Also if we feed infants, it is conceivable that they will then be able to learn because their brains can grow, and there again, giving them an adequate start and educating them, and having them healthy, we can at least reduce our welfare expenditures through that measure, and I believe that we can. We don't make long-range decisions at this point in this country, however.

Now, once we have decided that, we are going to have to decide what government should or shouldn't be doing. It can become a producer of health and medical care services, or it can be an expanding consumer of such services. It is already a producer by virtue of running the Veterans Administration, the Department of Defense, and the Public Health Service, all of which supply direct services to eligible beneficiaries. Recently a serious question has arisen as to whether government can or should expand, or even continue to be a producer of direct services, and I, for one, do not believe that evanescent political forces have ever been proven to be effective managers of nearly any type of institution, and for very simple psychological reasons. All one has to do is look at the development of the municipal, the state, and the Federal hospital systems in this country to see that they certainly are not shining examples of what government can do for the people, and I think the future may well find us looking for new ways to phase out transient governmental operations and phase them back to the private sector in local regions where we professionals and citizens can have some feeling of local autonomy in solving our own problems, which we can do better than distant control and distant interests can ever do. Absentee ownership doesn't work whether it's in housing, hospitals, or anything else. Increasingly, government has become a large consumer and its share of spending for health services has increased as we have said. Its ultimate intervention was necessary because of the inability again of free market forces to re-

solve the problems of accessibility, financial and geographic. Financial barriers were lowered with Medicare. The geographic barriers were lowered, for example, by the Hill-Burton program, which stimulated the development of hospital facilities in rural areas, and more recently by the legislation which stimulates the development of neighborhood health centers within inner-city areas. As a large consumer or purchaser of medical services, it has the obvious obligation to use tax monies wisely and prudently and to insure its constituency, that is, the taxpayers, that it is, in fact, buying a high quality product which is being delivered with some degree of efficiency. And if it uses the tax money wisely, it is going to stress preventive medicine, rehabilitation services, and low cost, easily accessible facilities where the long-run benefit to cost ratio is the highest. That doesn't let us doctors off the hook, nor should it let us off the hook. We are the ones who must structure these services. A government doesn't do it; committees don't do it; Federal legislation doesn't automatically do anything. The physicians have got to structure these things and be in the vanguard of such development. I think, finally, if it wants the best return on its money, it must set standards and evaluate the quality of services produced. The government and all of us have nobody to blame but ourselves for the present horrendous mess we are in with Medicaid, and many people who looked at that when it was first enacted knew all this was going to happen, and knew that there were no controls and no standards built into the thing, and an opportunity to help improve the system of services in this country was missed, and we are all paying for it now.

Finally, if efficiency is to be maximal, it must stimulate improved management of hospitals. Now this is a very difficult ground to plow, but there are amendments right now that are trying to stimulate competitive situations amongst regional hospitals of similar types to try to enhance the efficiency of their management. A conflict between public and private sector, consumer and producer, is present, and it will increase, I predict, and I am sad to say it, because I think it will lead in turn to the gross inefficiencies of prolonged debate characteristic of a massive bureaucracy as it struggles through the jungle of compromise to serve both producer and consumer interests, and, bear in mind, that while I say that the pendulum should swing a little more from producer to consumer interest, I am fully knowledgable about the fact that producers, whether they be doctors, or nurses, or hospital directors, or visiting nurses, or what have you, have got to have an amicable environment and an unfettered environment without the undue interposition of massive bureaucratic fetters or interference in their work with their patients, and I do believe in pluralism which must be maintained but not to the exclusion of resolution of problems. I think decision-making must be decentralized somehow from the Federal leviathan back to local regions, and I think there are no better people in local communities to do this than the medical profession, although I know we may conceivably drown in our democratic process. Bear in mind that our form of government is relatively young on this globe and is still being tested, but I still know of no better way to serve the needs of the people of this country, and our own particular world turns on free debate and ultimately on compromise. I think we need a healthy measure of individualism, which all of us revere as the strength of this country. After all, the first 100 years were founded on rugged individualism, self-reliance, the so-called Protestant ethic of rewards in this world, hard work, the Devil-take-the-hindmost, and every-man-for-himself. It was a wonderful experiment until about 1890, when a few people less fortunate

than the boys who were making it, like the Carnegies and the Rockefellers and a few other chaps who had built up massive monopolies, decided that the government had to intervene; then we swung with F.D.R. for the next 40 years, from 1930–70, thinking that apparently all we had to do as liberals was to look to central government to write more legislation and all would be well. Now, parts of that experiment have succeeded; other parts haven't. The pendulum is swinging back now. I think the assumption of responsibility and authority by central government can, in fact, degenerate into Fascism and loss of freedom, while individual initiative is eroded, the bureaucracy expands, and a willing citizenry assumes the supine position for the welfare state. These real hazards must be balanced against the inability of *laissez faire* and free market individualism to provide and guarantee certain inalienable rights to all the citizens of this country regardless of their race, creed, color, or financial condition. Health is, in fact, and should be, one of these rights. The balance between public and private action is a very delicate one and is still being tested in a relatively young country. New forms of public and private action to solve massive domestic social problems must be found. Government can be a large consumer of services, but the private sector must somehow solve these problems and solve them locally.

Francis Bacon said that the forward retention of custom is as turbulent a thing as change. We have spent an awful lot of time in the last 30 or 40 years in American medicine resisting change, and it has been an awful hard battle. Maybe in the next ten or twenty years we will spend as much energy in trying to change the system and resolve obvious problems. Change we must if we are to reach the Promised Land by this relatively circuitous route of conservatism to liberalism with the truth lying somewhere in the middle, with our own peculiarly American philosophy developed by William James which was and is pragmatism. A pragmatic individual realizes that the truth is plural and contingent, and forever in the making, that times do change, that problems must be identified and solved, hopefully by the free action of a free citizenry.

I cannot say it any differently. I believe fervently in private action by private citizens in local regions. I've said it a hundred times. One of the major reasons we have as much Federal intervention in the life of this country today is because its citizens have defaulted in their own responsibility to make democracy work, and I think we physicians have got a lot of work to do in this regard, because we have not been at the lead of social change, particularly in the last 20 or 30 years, after the first 50 years of our organized existence when we were, in fact, at the head of the pack.

I once again appreciate very much being asked here tonight, and I appreciate your forbearance for what has been, I am afraid, more than an hour of talk. I am greatly honored to have been asked and wish to thank Dr. Blumstein and Dr. Sturgis, and the Fellows of The College of Physicians of Philadelphia.

Curing Explosive Disillusionment[1]

By LEON H. SULLIVAN, D.D.[2]

There are times when we must build new roads, when the roads we have traveled become obsolete for the times. So a time has come for us to build new roads. Up to 16 years ago we lived in two Americas, each as distinct and different as two Americas could be. One was White America and the other, Black America. Those of us who were born in Black America attended Black schools, were reared in Black neighborhoods, went to Black churches. Our America was a Black one. Those who were of White America were, for the most part, born in White neighborhoods, attended White schools and White churches.

I know the problems of Black America, because I was born in Black America. I was born in an alley in a segregated town. When I went to school, I went to school on the Black side of the street where there was a small Black school. My parents worked on Black-type jobs; they were menial, service-type jobs. The only time the Black and White children met in the town where I grew up was on Halloween Night, when we met at twelve o'clock midnight in the middle of the street and had a great big fight, and then we went back to our Black and White Americas.

I did not know a White boy or girl by their first names until I had left where I was born and had come to New York City. I had finished college, but I did not know a White boy or girl by the first name until I was 20 years old. With some few exceptions, few in terms of the vast proportion of our Black population, this was true of many of us.

Then, in 1954, with the Supreme Court decision against segregation, White America and Black America began to come together into contact, really for the first time. For the first time, Black Americans and White Americans began to see each other in a new kind of situation and in a new kind of light. And the contact caused all kinds of reverberations.

Several years ago I was with my little boy Howard, who was then only eight years of age, in a hotel room in Atlantic City, and suddenly there was a tremendous sound outside the window. The windows shook, the glasses shook on the mantle piece, the beds shook, the chairs shook, everything rattled. My little boy Howard ran over to me and grabbed me by the legs. He was frightened. I took him by the hand and led him over to the window and pointed out an imaginary speck on the distant horizon and said, "Son, the noise you heard was the sound of a super jet cracking the sound barrier, and now that jet is flying silently into the horizon."

So the noise that we have heard that has shaken our beds and windows and rattled our chairs and confused and angered and disturbed many of us was inevitable. For it was the sound of the jolt of opportunity striking the barrier of discrimination. For freedom and segregation cannot live in a democracy without meeting each other one day. And when they meet, there is shaking and rattling and disturbance, people confused and angry. But it had to happen in order for America to become Americanized.

But the noise, the rattling and the shaking that disturbed some of us, does not

[1] Mary Scott Newbold Lecture XCIX, The College of Physicians of Philadelphia, 4 March 1970, transcribed from a tape recording.

[2] Minister, Zion Baptist Church, Broad and Venango Streets, Philadelphia, Pennsylvania 19140.

disturb me, for it is a part of a process of progress in a country that was founded on the concept of equality and democracy. And until all Americans have the same opportunity to life, liberty and the pursuit of happiness, there will be rattling and shaking of chairs and beds and windows and lives. For my children will never ride the old road again. They will have to ride the new road, equally, with every American citizen in this country. And that is why I say a hundred times that we must build new roads.

Now there are specific areas, which, for the purpose of this lecture, I suggest we must build. First, we must build new roads in the world of work. Every man and woman, when he becomes an adult, proves his adulthood by the work he performs. It requires more than years to prove a man an adult. A man proves his adulthood, if he is normal and able, to the degree that he is able to perform work. So, all men, to prove their adulthood and to be mature, must be able to participate, equitably, in the world of work, according to their ability to perform jobs.

Up to just a few years ago, the Black American was unable to perform equitably in the world of work, because he was discriminated against as far as employment opportunity was concerned in this country. He was never, therefore, physiologically, much less functionally, able actually to identify himself in his own mind as mature, as fully an adult, because he was restricted from the means that establishes maturity and that makes adulthood. Therefore, there were some things that had to be done in this country to see that this man and this woman were able to perform equitably in the world of work, to see that they were provided with the opportunity.

Many of you do not know that one of the most significant efforts to provide opportunity, equitably, in the world of work to Afros was initiated in the City of Philadelphia. It was not publicized in your newspapers; it was not publicized by your television; it was not publicized by your radio; it did not secure the national kind of news coverage that many other efforts that we call Civil Rights efforts secured. Many of you did not realize that as of 1959, in this city, just ten years ago, there was not a Black man driving a Pepsi-Cola truck in this city. There was not a Black man driving a 7up truck in this city. There was not a Black man driving a salesman's truck for a major bread company in this city. There was not a Black man driving a truck for a major oil company in this city. Just ten years ago, there was only a handful of Black women that had the opportunity to serve as cashier of a bank in this city. There was not a Black man driving a single newspaper truck for a single major newspaper in this city. That was just ten years ago in the City of Philadelphia.

In the year 1959—and this will be the first news that any of you have heard of this—more than a half million Afros in the City of Philadelphia, coordinately, withdrew their economic patronage from certain companies, one company at a time, one by one by one, for four years. It was not publicized in your newspapers, nor on your television screens that, for four solid years, one half million Black people at some point were not drinking a certain soda, or eating a certain bread, or buying a certain newspaper, or using a certain oil.

It was a program called "Selective Patronage." And it was the Selective Patronage Movement, without the aid of City Hall, without the aid of the Governor's Office, without the aid of the President or of his Executive Agencies, that tore down the barriers of discrimination against Afros in Philadelphia, almost completely in large industries. It was done without the help of Whites. It was done

by 500,000 Afros who worked in unison, until the walls of segregation in your newspapers, in your radio stations, in your television stations, in your bread companies, in your banks, came down. And we were prepared at one time to withdraw 100 million dollars from the banks of the city. We could have done it in 24 hours; we were that well organized. We were prepared at that time to take away the distribution of up to 100,000 newspapers a day. We were that well organized.

It was done without a single poster being carried, without a single march being held, without a single treasury being formed, without a single chairman being named. It was the best organized, unorganized group of people in the history of America. Without a meeting place, one-half million Afros, for four years, with their own ability to withdraw economic power, changed the structure of employment for Afros in this country.

In 1962, I received a telephone call from Rev. Martin Luther King, and I went to Atlanta and established what they called "Operation Breadbasket." It was a variation of the kind of work that was initiated in Philadelphia that changed the character of employment for Afros in this city forever. It will never be the same again.

The leaders of that program were 400 colored preachers, who utilized their pulpits as communication stands to tell the message, uniformly, to tens of thousands of parishioners every Sunday. The same message went to Baptist, Methodist, Episcopalian, Holiness and Church of God parishioners and to the people at home. And it was the great new working-class Black population of Philadelphia that changed the structure of employment in this city, by just utilizing their purchasing power, silently, without any noise, with just the noise of keeping their dollars in their pockets. Three thousand new jobs were opened to Blacks overnight. All of your banks began to employ Black tellers; all of your sales enterprises began to employ Afros for the first time. And most of the beginning of Black employment in sensistive jobs was initiated out of the movement of a community that utilized its strength for its liberty and for its own freedom.

However, when employment opportunity began to come, and it was somewhat of a chain reaction across this city and this valley, jobs began to come to our community that had never come before, jobs we hardly even knew existed, that were just average jobs as far as the White world was concerned, and I was finding it difficult to find men and women to fill the jobs that were becoming available. I began to realize that integration must continue and that our work towards integration must continue but that "integration without preparation was frustration." Massive efforts, I began to realize, must now be expended in the direction of preparation. Education was the tool for opportunity. Afro men and women, as massively as we withdrew our economic strength to secure jobs, must now massively take advantage of opportunities to learn skills to walk through the doors that had become open.

Therefore, I shifted my effort from Selective Patronage toward preparation. The ministers in the City of Philadelphia created a program called OIC, the Opportunities Industrialization Center, as a self-help movement, out of the community itself, designed to help men to help themselves.

Up to that point there had been manpower programs in the City of Philadelphia and in the large cities of America, but all of these programs that were federally sponsored screened my people out. A program had to be devised to screen my people in. It had to be a program of the people, by the people, for the people, created by the people, administered by the people, run by the people, for the

good of the people, in the true tradition of the American dream. It had to be a program starting where the people were, so that symbolically the community could see hope in its very existence where it was. For my community had lost hope.

So we took an old jailhouse, located in the heart of the most densely populated section of Philadelphia, in north Philadelphia, bought that jailhouse from the city by an Act of City Council for one dollar a year, and with the hands of the men and women of that community we began to change that structure from a jailhouse that held people behind bars into a place that put men behind machines. By the hands of men and women of that community, walls were rebuilt, floors were laid, the electricity was run into the building. It was an act of the work of a community striving to help itself.

There were no federal funds available for this kind of program then, because this was January 1964, and there was no poverty program then. Federal funds for manpower programs were distributed to traditional manpower programs, certainly not to a maverick program such as this, run by a bunch of preachers who hardly even knew what they were doing. We had to find funds from the community. So our churches pooled funds. One thousand Afro women visited beauty parlors and barber shops and went from house to house and raised $100,000. An anonymous donor gave us a gift of $50,000. My church loaned me $40,000, and I mortgaged my house. With the money we were able to gather, we hired a staff to initiate a program designed to help people to know that "genius is color blind and that it is not the color of man that determines how high he can rise, but what he, like a balloon, has inside of him." It was a program that said to a man, "It is not as important where you came from as where you are going." It was a program that said to man, "What you need is not handouts, but handups."

It had to be a program with a new approach, as far as educational methods were concerned. For just training a man with a skill was not sufficient. For a man with a skill, without the right attitude, would still be of little value to his community. Therefore, we structured the program in two parts. The first part dealt with attitudinal training. For two weeks to three months, every man and woman who came to the OIC Program passed through what I called the "Feeder Program." In the Feeder Program, through which all individuals passed, they had to learn the basics of education again. We dealt with adults, the average age being 28 and the average grade attainment being the ninth grade. One third of those who came to us were on relief, and 99% of those who came to us were in the poverty category. Many of them had what was called a criminal record.

We had to start the basics of education all over again, which means we had to teach reading, writing and arithmetic all over again to grown men and women. Only, we didn't call them reading, writing and arithmetic. People don't want others to know they can't read and write and do arithmetic. So, we called them "communication skills" and "computational arts," and people by the thousands flocked into the classrooms. We taught in the Feeder Program "consumer education," so that men and women would know the value of a dollar, know the value of the goods they buy, know how to tell a fresh loaf of bread from a stale loaf of bread by the markings on the wrapper, how to tell a fresh chicken from a stale chicken as you know can be done from smelling, how to know the value of a good piece of cloth from a bad piece of cloth by the feel of it.

Every man and woman who came through that program learned the value of

his own heritage. This was important to me, because for 100 years Afros had been brainwashed into inferiority. For 100 years, from the day they were born, little children had been taught in the books that they read, from the stories that they heard, and from everything that they saw that Black was inferior and White was superior. Even in the food that they ate they were taught this, for when cake was black, it was devil's food, and when it was white, it was angel food. Even in the food there was a shaping of the mentality and the attitudes and the thoughts of little children.

We had to teach a pupil his heritage, to be proud of what he was. We began to teach of great Black men who had adorned the pages of history, much of which had been lost to the modern world: of Aesop the fable writer, of Hannibal the military genius, of Dr. Williams the heart surgeon, and of Dr. Drew who participated in the blood plasma discovery.

All of a sudden Black men and women developed a sense of pride in being Black. Black women didn't have to be blond to be beautiful. And Black men didn't have to be white to be smart. We taught a man self-pride, to be proud of what he was and what he had and to make the most out of it.

Then, in addition to teaching a man self-pride, we taught an appreciation for others. We taught about Italian Americans and Irish Americans and Appalachians. We taught about all American minorities in the Feeder Program. We found that, when a man has respect for himself and respects others, he doesn't have a need to hate anymore. And the attitudes of men and women were changed and a sense of direction was seen, and a new road was found for men to walk upon. We taught the value of the world of work and how important it is to a man's well-being, and to his community's well-being, and to his nation's well-being, and to the world's well-being, that a man appreciate his participation in the world of work.

Then, from the Feeder Program, we fed men and women into OIC Skill Centers where they learned skills for jobs that existed: to be millers, to be grinders, to be electrical workers, to be lathe operators, to be electronic assemblymen, to be electronic technicians and to be secretaries, to be power machine operators and to be chemist assistants and draftsmen, and to pass civil service tests.

And from that little humble beginning, in that old jailhouse, with dollars and pennies raised out of the community itself, and with one anonymous gift of $50,000, OIC was born in the City of Philadelphia. That was six years ago. In those six years, OIC in Philadelphia alone has trained and placed on jobs 10,000 men and women. According to the evaluations of the Federal Government, OIC now adds $35 million dollars each year to the purchasing power of this city. According to the Commonwealth of Pennsylvania, OIC saves the City of Philadelphia, in relief check money, six million dollars a year, three times the amount of money it costs each year to run the program. There are 6,000 people on a waiting list. There are 40,000 volunteers involved in the program. It has become the citadel of hope for the Afro masses of the city. Puerto Ricans by the hundreds, Mexican-speaking Americans by the hundreds, and Whites now by the hundreds, come to OIC. It has become the American program for the poor, the unemployed and the underemployed for all of the American people.

From that little beginning, from that little old jailhouse in Philadelphia, OICs are now established in 90 cities across this country, training 50,000 people every day. In San Jose, California, 80% of our trainees are Mexican Americans. In Seattle,

Washington, a large number of our trainees are Eskimos. In Oklahoma City, one-fourth of our trainees are American Indians. In Charleston, West Virginia, 60% of our trainees are Appalachian Whites. In Roanoke, Virginia, 80% of our trainees are Whites from the Blue Ridge Mountains of Virginia. For the first time, White and Black brothers and sisters are sitting beside one another learning a trade together.

And OICs are now developing in Ghana, Nigeria, Kenya and Ethiopia. And last month we opened our first office in the Dominican Republic in Latin America. From an old jailhouse in Philadelphia, a program has developed that could well help change the character of men around the world, as men find a new road to walk upon.

Next week I shall be speaking before the Senate of the United States, for the first time in the history of this country to present a program initiated from the guts of the community, to be presented to the United States of America for the adoption of the U.S. Congress. If it is done and succeeds, OICs will, in the near future, be established in 1,000 communities throughout the length and breadth of America, and they will become the central manpower establishment in between the public schools and the technical schools and colleges of America, to train the unemployed and the underemployed in the whole American system of manpower education. From a little jailhouse, men and women of God are finding a new road.

The second road we must find, in addition to the road of work, is the road of wealth. Afros and minorities must do more than work on jobs. We know that we must create jobs, because in the final analysis a group of people is respected to the degree to which it creates wealth, rather than utilizes wealth.

New systems, therefore, have been attempted in this direction. How is it possible for a group of people, without banking establishments, without financial houses, without vast resources, how is it possible for a group of people, starting from where they are, to create wealth? Again the Bible has the answer. For Jesus took bread and fish from a boy and fed 5,000. Why not men and women? Why cannot men and women take the little they have, pool it together to create wealth for their community? So we asked 50 members of our church to invest $10 a month for 36 months, in what we call a 10–36 plan, and with that money we would, we said, initiate businesses and try to enhance the uplift of the community. But, Sunday morning when the announcement was made, 200 members of the Zion Baptist Church began to put $10 down for 36 months. At the end of the first year, enough money was accumulated to build a million-dollar apartment complex, Zion Gardens, at Girard Avenue and 12th Street. Six hundred persons were added to that number, and those 600 persons raised enough money to build Progress Plaza, valued at two million dollars, without a penny of government money, just conventional financing and money from the people themselves.

A couple from my church went to rent an apartment, and they were refused because they were Black. They came back and told us, and the next week we bought the apartment house. For the first time, we had money that we could use to help us find our own way.

The Program was opened from one church to a community. Today, 7,000 men and women each month put $10 down for 36 months. Those 7,000 people now own an Aerospace Company, the first Aerospace Company in the world owned by Black people, making electronic components for travel to the moon and other things that are for the benefit and welfare

of the community and humanity. These same people opened a garment manufacturing company that makes thousands of garments a week and that will one day be servicing people all around the world.

Next Sunday afternoon, March 8, at 3 P.M., thousands of people will assemble at a simple, homey site at 17th and Venango Streets. Why will they assemble around one little speck of a building, so small that you wonder what is the importance of it? It is the beginning of a chain of inner-city grocery stores that will one day supply hundreds of thousands of people with merchandise and food in a chain called "Our Markets." They will be established in every neighborhood in the inner city, with rugs on the floor, such as you have in 7–11. Only the prices will be less. That chain of stores will create a whole new system of merchandising that will supply fresh, clean, safe food for boys and girls and men and women who have had to eat rotten food, because it was what they were sold because of where they lived and because nothing else was provided for them in their neighborhood. There are 100 communities today that are making plans for the building of "Our Markets" and silently, like a mighty stream of hope, Afros, out of their own resources, will be able to see the benefits of their own efforts.

The last road that must be built is a road of health. Your large cities will become more and more Black. If a census were taken today in Philadelphia, you would find that 35% of the population, no less, would be Afros. By the year 2000, Philadelphia will be 75% Black. Many hospitals and medical institutions are situated in Philadelphia. A new road has to be built in order that hospitals will serve the community and the coming American population that will inhabit your city and mine. The crucial need of my community, besides that of work and that of wealth, is that of health.

Our children die far out of proportion to other children; our people die far sooner in proportion to other people. The disease rates are far greater in proportion to other people. We understand the reasons why. We must attack the causes, and we must deal with the problems.

Unfortunately, many of our medical institutions treat Black men as though they were inhuman, particularly in many of its clinical services. This is not what I have heard; it is what my family has experienced. We note an attitude among some of the medical profession that Blacks are not quite the same as Whites and do not receive the same medical attention. There are many Blacks in concentrated communities who would prefer to be sick than to go to clinics, because they are not treated like human beings. I have not seen or heard of this *one* time; my church is large, and I hear of it over and over again.

There is a need for nursing services, but they will not be provided in the traditional way. A new road will have to be built, a new road for para-professionals—not one hundred, or a thousand, but tens of thousands, and ultimately hundreds of thousands, who will serve the needs of an expanding community that already has lost faith in the medical system, as far as clinical services are concerned.

This might suggest the need for many medical service units, far different from the medical service units that we see structured today. Perhaps we may have in every neighborhood a medical service house, attended by para-professionals, trained in existing medical schools and institutions, with assistance from programs such as the Opportunities Industrialization Center. It also means that, because of the dearth of and the need for Black physicians, an emphasis in education will be placed on the development of medical services from the very beginning of the public school, even in the first and the second years of elementary school. We

might find Afros, Puerto Ricans, Mexican Americans and Indian Americans, who are one million in number now, who will be able to fill the great void of medical needs in our American cities and in our rural communities across this country.

The new road for medical services to the poor and the needy is perhaps the greatest challenge in America today. It rests in the hands of those of you who lead this profession to build new roads to find new ways.

As an American, I have faith in my system, and as a Christian, I have faith in my God, and I know that God will help us build these new roads: for the world of work, for the wealth of the community and for the health of the community. God has never failed man yet, and He will not fail man now!

So I walk in faith, seeing the light, because I know we are going to make it. Somehow, we shall change together, Black and White together, the cries in our streets from BURN, BABY, BURN to BUILD, BROTHER, BUILD.

Experimental Treatment of Some Neurological Disorders[1]

An Abstract

By GEORGE C. COTZIAS, M.D.[2]

Dr. Cotzias expressed his cordial thanks to The College of Physicians of Philadelphia for the unique honor of being invited to deliver this highly distinguished lecture. He indicated that his presentation would cover some experimental results already achieved in the long term treatment of Parkinson's syndrome and chronic manganese poisoning. Thereafter he would indicate some of the drawbacks of this treatment and some efforts proposed for evaluating and possibly allievating the drawbacks.

Dr. Cotzias indicated that he did not invent L-Dopa, that he was not the first to use it in man, and that he really did not know how it works. He claimed as a contribution of his associates and himself the very slow, gradual administration of L-Dopa by mouth to large but effective final doses. He said that this has tended to circumvent various limiting toxicities such as nausea, vomiting, faintness, etc. and thus has permitted the observation of the therapeutic results.

He indicated that the main anatomical defect in Parkinson's syndrome is demelanization of the *substantia nigra,* which may precede the death of the cells of this organ. The chemical change discovered by Dr. Hornykiewicz in Vienna is a marked diminution of various amines remote from the *substantia nigra,* namely in the *corpus striatum.* These amines include dopamine, norepinephrine and possibly also serotinin.

The work at Brookhaven National Laboratory addressed itself first to the correction of the demelanization of the *substantia nigra.* This was attempted by means of administering melanophore stimulating hormone to Parkinsonian patients. However, the patients' condition, notably the tremor, became worse. Since concomitantly it was noted that the patients' skin had become darker, the following myth was formulated: namely, that the skin, which is a large organ, had been picking up precursors necessary for the synthesis of melanin under the influence of this hormone and had therefore been causing more of a deficiency within the brain. The value of this hypothesis was only in that it placed a premium on the use of precursors for melanins which happened to be similar to those which are involved in the synthesis of catecholamines. The first such precursor to be used was the amino acid, phenylalanine. Both chronic and acute administrations were practiced. However, phenylalanine was either inactive in some Parkinsonians or it aggravated the Parkinsonism in others. Another myth was therefore made, namely, that the patients with Parkinson's syndrome had a defect in the chemistry of the brain which prevented the hydroxylation of phenylalanine into tyrosine and dopa. Tyrosine was skipped from these studies and L-Dopa was used. Since only the D,L- compound of L-Dopa was available in adequate amounts, this compound was used for the studies instead of the preferable L- com-

[1] Mary Scott Newbold Lecture XCVII, The College of Physicians of Philadelphia, 7 January 1970.

[2] Head, Physiology Section, Medical Research Center, Brookhaven National Laboratory, Upton, L. I., New York 11973.

pound which was not available at the time.

Administration of D,L-Dopa was given in slowly increasing doses for the following two reasons: 1., it was thought that L-Dopa would have to be changed by the action of the enzyme dopadecarboxylase into dopamine, its active metabolite. In order to saturate the enzyme dopadecarboxylase, one should rely on the precedent of chemists who saturate their enzymes by slowly adding substrate. 2., this biochemical precedent offered the clinical advantage that, if the L-Dopa had toxic effects, the gradual administration would permit the detection of toxicity prior to its becoming limiting.

With this very slow administration of D,L-Dopa, up to 16 Gm./day, indubitable benefit was observed in patients suffering from Parkinson's syndrome. However, four out of 16 such patients developed a depression of their leukocytes which was gradual in two and precipitous in another two. This leukopenia was thought to be due possibly to the fact that the racemic compound was given, and it was expected that, if one were to shift to L-Dopa, the natural amino acid present in tissues, one would avoid some of the toxicity while potentiating the therapeutic effects.

This postulate proved to be correct to a large extent. Highly significant, often dramatic, improvement was induced in Parkinsonian patients which has been sustained over a long period of time. The improvement observed in a group of patients has involved all signs of Parkinson's syndrome, albeit not to the same degree in each case.

Over the long range, the significant phenomena which have occurred with the prolonged administration of L-Dopa have been the following:

1. Some patients have developed involuntary movements which have varied from one case to the next. In some instances the involuntary movements consisted of grimacing, contractions of the neck muscles, or buccolingual movements. In others, peripheral muscles participated with gesticulation, chorioathetoid movements of the legs, or myoclonic movements of groups of muscles. These involuntary movements have been intermittent and could be eliminated by stopping the drug.

2. The development of a diurnal intermittency of the control of the symptoms. This is characterized by random emergence of Parkinsonism lasting from a few minutes to a few hours. The intermittency is often severe enough to cause profound loss of function in patients who otherwise had become self-sufficient by receiving L-Dopa.

It was postulated that the involuntary movements which follow the administration of L-Dopa are due to an abnormal accumulation of dopamine in neurons which ordinarily do not receive this amine. In order to determine this, an amine similar to dopamine, namely apomorphine was used. Results to date indicate that apomorphine has induced involuntary movements similar to those induced by L-Dopa, even when L-Dopa had been stopped for the administration of apomorphine. It was stressed that the experiments with apomorphine regarding involuntary movements are still unfinished. However, apomorphine was also used to determine the mechanism by which diurnal intermittency of the control of Parkinsonism was brought about. It was postulated that there exist two alternatives to explain this intermittency. The first would be that, for reasons unknown, L-Dopa suddenly does not enter the brain. The other alternative would be that, for reasons unknown, the neurons to which L-Dopa is being addressed suddenly and temporarily become refractory. In order to differentiate between the two hypotheses there was used apomorphine which enters the brain through an entirely different

pathway than does L-Dopa. The results are quite preliminary, but for the moment they seem to favor the hypothesis that the administration of L-Dopa imposes eventually an intermittent inability of the drug to enter the brain because, upon administration of apomorphine, it appears that the patient does develop a therapeutic response, although such a response was temporarily absent during the administration of L-Dopa. By virtue of these experiments, it appears that apomorphine constitutes a model for the synthesis of new dopaminergic drugs which may be useful in the diagnosis and therapy of Parkinson's syndrome.

By contrast to the patients with Parkinson's syndrome, those with chronic manganese poisoning have shown only some intermittency in the control of the Parkinson's symptoms but they have not shown any involuntary movements as yet. This work is being conducted by Dr. Ismael Mena at The Catholic University, Santiago, Chile, in collaboration with the scientists at Brookhaven National Laboratory who are working with Dr. Cotzias.

Dr. Cotzias concluded that L-Dopa appears to be in the same stages of development as the early days of insulin. As with insulin, the medical profession needed to develop some experience before the drug became useful in medical practice. One manner by which the profession can gain experience with the drug is for the drug to become available to physicians. In view of the fact that even the worst, most adverse statistics with L-Dopa have shown relatively reversible difficulties from the use of this drug, Dr. Cotzias thought it quite safe to permit practitioners of medicine to try this drug on their patients.

The Philadelphia School of Anatomy (1820–1875)

By DONALD C. GEIST, M.D.*

In *The Cleare Sun-shine of the Gospel Breaking upon the Indians in New England* is found a letter dated 24 September 1647 from John Eliot in Roxbury to the Reverend Thomas Shepherd of "Cambridge in New England." The Apostle declares of the Indians that "all the refuge they have and relie upon in time of sickness is their Powows; so that it is a very needful thing to informe them in the use of physick and most effectual meanes to take them off from their Powowing. Some of the wiser sort I have stirred up to get this skill; I have showed them the Anatomy of man's body and some general principles of physick. I have had many thoughts in my heart that it were a singular good work if the Lord would stirre up the hearts of some or other of his people in England to give some maintenance toward some Schoole or Collegiate exercise this may, wherein there should be Anatomies and other institutions that way." This statement is given by Hartwell as the earliest utterance about anatomy in America. A far cry from our present understanding, it serves as a starting point in the history of anatomy in America. One hundred seventy-three years later the Philadelphia School of Anatomy was founded, probably the first such private school of anatomy in America.

Young America was not yet able to offer many forms of education, especially medical education. But it was starting, and progress, while slow, was steady. Private courses in anatomy were offered by John Bard and Peter Middleton in New York City as early as 1750. In 1751, Thomas Cadwalader, a pupil of Cheselden, gave demonstrations in anatomy at Second Street above Walnut in Philadelphia. From 1752 until 1755, a series of public lectures on human and comparative anatomy and the history of anatomy was given at Newport, R.I., by William Hunter, a relative of the famous English anatomist of the same name. Thomas Wood, surgeon, in 1752 advertised in the New York papers "a course on osteology and myology in the city of New Brunswick, N.J.," to be followed "in the case of proper encouragement by a course in angiology and neurology and a course of operations on the dead body." Ten years later there appeared in the *Pennsylvania Gazette* (November 25, 1762) the following announcement: "Dr. Shippen's anatomical lectures will begin tomorrow evening at six o'clock, at his father's house in Fourth Street. Tickets for the course to be had of the doctor at five pistoles each and any gentleman who inclines to see the subject prepared for the lectures and learn the art of dissecting, injections, etc. are to pay five pistoles more." His introductory lecture was given in the State House and twelve students attended.

Dr. Samuel Clossy, an Irishman, began his course of lectures in anatomy in New York in 1763 and was chosen the first Professor of Anatomy in King's College five years later. Warren, Professor of Anatomy at Harvard College from 1782 to 1818, gave a private course of dissections to a class of medical students in Boston in 1780. He was followed by his son,

* Fellow of The College of Physicians of Philadelphia; Consultant in Surgery, Misericordia Division of the Mercy-Catholic Medical Center; Editor, *Philadelphia Medicine*, 2100 Spring Garden Street, Philadelphia, Pennsylvania 19130.

John C. Warren, who opened a public dissecting room at No. 47 Marlboro Street in Boston in 1809. Dr. Nathaniel Potter, in a pamphlet published in 1838, alluded to the destruction in 1807 of the anatomical theater of Dr. John Davidge, then a private teacher of anatomy and surgery. The list is probably incomplete, and other examples of similar lectures could be found. None of these efforts can be rightfully considered schools of anatomy in the accepted sense.

There were many things to hamper and prevent instruction and education in anatomy. Chief among these was the need for and difficulty in securing bodies for dissection. Legal support for this study was yet to come, and for a long time the search for bodies served as a subject for serious and bitter discussion. The first statutory provision for the use of the human body for dissection appears to be the Massachusetts Act of 1784, which provided that the bodies of those killed in duels and those executed for murder might be given to surgeons "to be dissected and anatomized." New York, in 1789, passed an act making it possible for the courts to add dissection to the death penalty in cases of murder, arson and burglary. The First Congress of the United States, by its Act of April 30, 1790, gave federal judges the discretion of adding dissection to the sentence of convicted murderers. In general, however, legislation was slow in coming, and, even with some in force, the period of "body snatching" produced many an interesting and gruesome tale. The increasing number of students of medicine, the development of medical schools, and the increasing interest in the advantages of an education were beginning to be appreciated in America. The need for a systematic school of anatomy, as part of the education of the doctor, was evident. Who were the physicians who started and continued the Philadelphia School of Anatomy? What was their progress? Where was it located and what of its physical structure and arrangement?

The Philadelphia School of Anatomy was opened in March, 1820, as the private anatomical school of Dr. Jason Valentine O'Brien Lawrance under the name of the "Philadelphia Anatomical Rooms." It was housed in the easternmost of two buildings on the North side of Chant Street (then College Avenue), between Market and Chestnut and Ninth and Tenth Streets. Until 1839, the rooms were in the east building, the one to the west containing a warehouse and carpenter shop. Later, both buildings were used with infrequent variation. The lecture room was built like those in the medical schools with seven tiers of benches, the highest being twenty feet above the arena. In the arena, there was a revolving dissection table with lights overhead. A skeleton hung from the ceiling and could be raised and lowered as required. The lecturer stood at the South, or Chant Street, end of the building. The first floor housed the dead room and later became the museum. In 1824, Lawrance established a reading room in the school with books and journals. The janitor and his family slept under the seats, and the first floor supplied them with a parlor, dining room and kitchen. It is said that the neighbors complained of the stench from the building and one wonders about the janitor and his family!

During its lifetime, from 1820 to 1875, the Philadelphia School of Anatomy was under the direction of thirteen physicians. Most of their terms were short, but three of the owners conducted the school from seven to ten years. Of these, Joseph Pancoast directed it for seven years, D. Hayes Agnew for ten, and W. W. Keen for nine, their ownership occupying almost one-half of the school's lifetime. All of these physicians played important parts in the development and work of the school and, when they left, accepted teaching positions in various medical schools. The

institute's greatest activity occurred during the time that it was directed by Drs. Pancoast, McClintock, Agnew and Keen. The short duration of Lawrance's life gave him little opportunity to develop the enterprise. His position as its founder, his competency as a teacher of anatomy and his earnestness in development of the school were his contributions.

The manner of instruction varied somewhat with the school's teachers. As time progressed, it became more standardized, so that in later years the arrangement of the course was much the same, regardless of the owner. Godman, teaching in 1823, gave three courses a year, twice weekly from September until November, four times weekly from November to March, and twice daily from March to April. The fee was ten dollars. Godman also introduced teachers of other medical subjects as lecturers. Pancoast's course was the same as Godman's. Agnew lectured five evenings a week from the first of September until the first of March and three times a week during the day from the first of April until the first of August. Instruction included both lectures, demonstration of dissection before the students, and participation by them in the dissection.

Jason V. O'B. Lawrance

Lawrance, deprived of his parents in early childhood, was reared by his maternal grandmother and introduced to medicine by his stepfather. His father came from New Jersey and his mother was of Irish extraction. Born in New Orleans, Louisiana, in 1791, the son spent most of his boyhood in that city. Some of his early education was secured at Lower Dublin Academy near Philadelphia, where he remained for about three years. He then returned to New Orleans to study medicine with his stepfather, a Dr. Flood. In 1812, he returned to Philadelphia and became a pupil of Dr. Physick. Lawrance voluntarily entered the Pennsylvania Hospital in 1814 to fill a vacancy as house physician and surgeon. His endeavors earned him a personal approbation as "the managers directed their secretary to communicate to Doctor Lawrance the expression of their perfect satisfaction at the manner with which they had been performed and of their approbation and esteem." In March 1815, he received his M.D. from the University of Pennsylvania. Following this, he returned to New Orleans to engage in practice with his stepfather. He attained a busy and lucrative practice and became acting physician and surgeon at the New Orleans Hospital. Dissatisfied with medical practice, and having a desire for further study of anatomy, Lawrance returned to Philadelphia in 1818. In the fall of that year, he was appointed assistant to William Gibson, Professor of Surgery at the University of Pennsylvania, and, in 1822, the assistant to William Horner, Professor of Anatomy. His work at the Philadelphia School of Anatomy began at its onset in 1820. An appointment as surgeon to the Philadelphia Hospital (Blockley) was valuable to him because of his interest in diseases of the brain and nervous system, there being many such patients there. In 1818, he married "an amicable lady by whom he had only a daughter, both of whom survived him."

Lawrance's activities included an interest in the question of absorption through the venous system. Together with Drs. Coates and Harlan, Lawrance constituted a committee to investigate the works of Magendie on venous absorption. Funds were given to them by Dr. Nathaniel Chapman in the sum of a hundred dollars to further this work. Lawrance's curiosity encompassed both typhus and yellow fever, and he investigated typhus by performing autopsies on patients with the disease. Dr. W. W. Keen stated that Lawrence "investigated the subject of yellow fever

in the epidemic of 1820 and left the most complete record of autopsies which had been made up until that time. He left over three thousand pages of manuscript, much of it for use in a work on pathological anatomy." (The author has been unable to find records of this work.) At the School of Anatomy, he gave a six-month course of lectures on anatomy and surgery. The course began immediately after the spring graduation and continued, with the exception of August, until the ensuing November, six lectures each week. During the winter, he lectured at the University of Pennsylvania and assisted Dr. Horner with his dissections. While treating patients with typhus in the Ridge Road District, Lawrance developed the disease, became rapidly worse and died on April 19, 1823. The founding of the Philadelphia School of Anatomy and its important position in anatomical education form a fitting memorial for this young man, whose medical curiosity and ability as a student, teacher and investigator offered so much promise.

John D. Godman

After the death of Lawrance, the Philadelphia School of Anatomy was conducted by Dr. John D. Godman. Born at Annapolis, Maryland, on December 30, 1794, he was the son of Captain Samuel L. Godman, a British officer during the Revolution. Orphaned at the age of five, Godman went to live with an aunt in Wilmington, Delaware. His aunt played a large part in his childhood, teaching him to read and stimulating his interest in learning. It is said that he could read at the age of two. The death of his aunt, when he was six years of age, relegated him to the charity of friends and relatives. While living in Baltimore, he became a printer's apprentice, but disliked the work and became a sailor in a flotilla then stationed in Chesapeake Bay. He soon left the flotilla and began the study of medicine with Dr. Luckey of Elizabethtown, Maryland, later leaving him to be instructed by Dr. Davidge, then Professor of Anatomy at the University of Maryland. He progressed so well as a student that when Dr. Davidge was invalided with a fracture of his thigh, Godman was asked by the faculty to substitute for him. Upon completion of his studies, he settled in New Holland, Maryland, remaining in practice there for a brief time and then going to Anne Arundel County as a medical practitioner. Dissatisfied with this role, he returned to Baltimore where he was married and became a pupil of Dr. Hall. The following fall, Godman began a course of medical lectures at the University of Maryland. Attending the lectures during the next two winters, he was graduated in the spring of 1818 and journeyed to Philadelphia. While there, he accepted an appointment as Professor of Anatomy at the Medical College of Ohio in Cincinnati, Ohio, and remained there until October 1822, when he and his wife returned to Philadelphia. He established himself as a private lecturer of Anatomy and Physiology and hired the anatomical rooms vacated by Lawrance to continue the Philadelphia School of Anatomy. Eloquent as a speaker and a fine teacher, Godman rapidly gained reputation in his work in this city.

John Godman possessed a number of talents. As a linguist, he could read and write Latin, French, German, Danish, Spanish and Italian. A number of papers were translated by him from the Latin, French and German languages, among them Larasseru's *Narrative of Lafayette's Visit to the United States.* He was an accomplished naturalist, having developed as such during his stay in Maryland. He published a *System of Natural History of Quadrupeds,* said by Gross to be the first work of its kind in this country. During the last months of his life, although ill with consumption, he published *Rambles of a Naturalist* and did considerable

writing in natural history for the *Encyclopedia Americana.* His medical contributions were numerous and included a detailed work on the fasciae of the body, as well as *An Account of Some Irregularities of the Structure and Morbid Anatomy* and a second edition of *Bell's Anatomy with Notes.* Dissections before the students were always a part of his instruction, enabling them actually to see and identify anatomical structures. He believed that dissection could not be replaced with any other method of instruction. His lectures covered osteology, anatomy of the brain, herniae, lithotomy, fractures and dislocations. The winter course began the second week of November and continued until the month of April, demonstrations being given twice a day. A library, containing a collection of books and numerous foreign and American journals, was available to the students. The last few months of his life were spent in Germantown, where, in spite of freedom from work, rest and medical care, his illness progressed until his death on April 17, 1830.

James Webster

The third mentor of the Philadelphia School was James Webster, who directed the school from 1826 until 1830. W. W. Keen, in his history of the school, says that Webster was not as polished and as industrious as his predecessor, but that he was a good teacher and an excellent anatomist. He was devoted to his students and was active in securing subjects for dissection. There is little record, however, of his activities at the Philadelphia School. A circular of the Geneva Medical College in New York, announcing the spring course, records: "The Mode of Teaching Anatomy adopted in this institution is that first suggested by the late Dr. John D. Godman and called by him the 'Analytical Method.'" It further states that this plan of teaching was followed by Dr. Webster as Professor of Anatomy. One may assume that his method of conducting the work at the Philadelphia School would follow that of Godman. In an address to the graduates of Geneva Medical College on January 23, 1844, Webster reminds them that their work in anatomy is just beginning, saying, "Allow me to say to you, gentlemen, you are but beginners yet; you have merely taken the initiatory steps and your past knowledge must be regarded as tributary only to your future attainments." Webster was editor of the American Medical Recorder, and published the first American edition from the first London edition of *A Manual of Surgical Anatomy by H. M. Edwards, DMP, Demonstrator of Anatomy at the Medical School, Aldersgate Street.* Caleb B. Matthews, Isaac Remington and an "Association of Physicians in Philadelphia, New York, Baltimore and Norfolk" helped him in producing the American Recorder. In one of its issues, Webster announced the beginning of a smallpox vaccine institution in Philadelphia with a supply of vaccine available at the journal's publication office for physicians who required it. He was editor of the Medical Recorder until 1829, when it merged with the American Journal of the Medical Sciences. Webster relinquished the Philadelphia School of Anatomy in 1830 to become Professor of Anatomy and Physiology at Geneva Medical College where he remained until 1849.

Joseph Pancoast

During the year 1830, the anatomical rooms were not in use, the only hiatus in the school's history. The school reopened in 1831, under the guidance of Joseph Pancoast, a distinguished surgeon who was to spend most of his professional life at Jefferson Medical College, where he succeeded Dr. George McClellan. Pancoast was born near Burlington, New Jersey, on November 23, 1805, the son of John and Anna Pancoast. He entered the

University of Pennsylvania and received his M.D. degree in 1828, then immediately began to practice medicine in Philadelphia. Married to Rebecca Abbott, the daughter of Timothy Abbott, on July 2, 1829, they had one son, who also became a physician. The year 1831 found the young doctor as physician and visiting surgeon to the Philadelphia Hospital (Blockley), an appointment held by him until 1845. In 1838, Pancoast succeeded George McClellan as Professor of Surgery at the Jefferson Medical College and was chosen for the Chair of Anatomy at the same institution in 1841, continuing until his resignation in 1874. Pancoast was also on the Staff of the Pennsylvania Hospital from 1854 to 1864. Upon his resignation at Jefferson Medical College, he was succeeded by his own son.

In his Introductory Lecture, delivered at the commencement of the winter course of anatomy for 1834–5, Pancoast gives his opinion of what anatomy really is: "As it should now be taught, anatomy consists in an account of all the organs of the body, of their relation to one another, of the constitution, function and uses of every part, in short, a *catalogue raisonne* of the thousand organs of which the human frame is composed." His tenure at the Philadelphia School of Anatomy was active and productive. In his teaching, he spoke of the types of anatomy, i.e., general, specific and comparative. Morbid anatomy was believed to be important in this study, and he stressed its importance in medical jurisprudence, stating, "Legal medicine is founded in almost all cases upon a knowledge of anatomy." It is interesting that Webster, his predecessor at the school, voiced a similar opinion. Pancoast's achievements included the origination of a number of operations for exstrophy of the bladder, cataract, empyema and strabismus. Pancoast was a voluminous writer, contributing much to the literature of his day. He translated J. F. Lobstein's *De Nervi Sympathetici Humanae Fabrica et Morbus* and, in 1831, presented a *Treatise on the Structure and Function and Disease of the Sympathetic Nerve*. This was followed by an edition of Manec's *Great Sympathetic Nerves* and his *Cerebrospinal Axis of Man*. Pancoast also contributed to three editions of Caspar Wistar and William Horner's *System of Anatomy*. His best literary accomplishment was his own *Treatise on Operative Surgery*, the first edition of which appeared in 1844 and the third and final one in 1852. His manner and method of teaching anatomy was by lectures with accompanying dissection and demonstrations, as followed by his predecessors at the school. After a long, active life as teacher, practitioner and writer, he died in 1882, 77 years of age.

Justus Dunott and J. M. Allen

When Pancoast left the school to begin his work at Jefferson Medical College in 1838, Justus Dunott succeeded him and remained about three years, when Dr. J. M. Allen became his associate. After James McClintock's appointment to Castleton Medical College, Dunott and Allen held both buildings jointly. Keen says that soon after this ("precisely when I have been unable to discover"), Dr. Allen was left in sole charge and conducted a most successful school until 1842. Dunott was a non-resident Fellow of The College of Physicians of Philadelphia, received his medical degree from the University of Pennsylvania, and died in 1899.

The Annual Announcement of the Medical Department of Pennsylvania College for the 1852–3 session lists among the faculty J. M. Allen as Professor of Anatomy. It states that he was elected to succeed Dr. W. H. Grant and had previously been Demonstrator of Anatomy in Jefferson Medical College and Lecturer on

Anatomy in the Philadelphia Association for Medical Instruction. Some of these announcements contain lists of books recommended to the students, among them *Allen's Dissector* or *Allen's Anatomy*. This was his book, *The Practical Anatomist or the Student's Guide in the Dissection Room*. Consisting of 630 pages with 266 illustrations, it is a well-arranged and detailed textbook of practical anatomy.

James McClintock

Until 1839, the Philadelphia Anatomical Rooms consisted only of the east building, the west being used as a storehouse. In 1838, Dr. James McClintock fitted up a dissecting room at the southeast corner of Eighth and Walnuts Streets and called it the Philadelphia School of Anatomy. Early in 1839, he opened the western buildings and combined the second and third stories into a lecture room.

James McClintock was born in Lancaster County, Pennsylvania, in 1809. His father, John, was an immigrant from County Tyrone, Ireland, who came to Philadelphia, where he became a successful merchant. McClintock began the study of medicine in the office of Dr. John Eberle in 1826, later moving to the office of Dr. George McClellan. During his student days, he enjoyed the privileges of the clinics at the Philadelphia and Jefferson Medical Hospitals and became a member of the first class to graduate from the Jefferson Medical College, February 28, 1829. After his graduation, he was a demonstrator of anatomy for Dr. Samuel McClellan until 1831, when he was appointed vaccine physician of Philadelphia. He served on the obstetrical staff of the Philadelphia Hospital during the year 1840. In 1841, he was elected Professor of Anatomy at Vermont Academy of Medicine, afterwards called the Castleton Medical College. Shortly after his arrival there, he assumed the duties of the President, as well as Professor of Surgery and Anatomy. In 1843, McClintock came back to Philadelphia to continue the work at the Philadelphia School of Anatomy.

In June of 1857, Dr. A. B. Campbell, Chief Resident Physician at the Philadelphia Hospital, resigned and McClintock became his successor. His selection caused great excitement in the institution, resulting in the resignation of residents and staff members and the withdrawal of the visits of the students to the hospital. He presented a letter of explanation to the Board of Guardians, but was replaced by Dr. D. K. Smith. We next find him as Treasurer of the City of Philadelphia for the year 1862–3. In 1864, he gave up the practice of medicine to engage in commercial business as a "botanic, ecclectic and Thompsonian druggist" with a store at 722 Market Street. Much of his time was devoted to his "Family Medicines," prescriptions which he used in caring for the sick, but whose contents he would not divulge. This secrecy caused the difficulty when he was appointed Chief Resident Physician at the Philadelphia Hospital, his refusal to divulge the contents being considered as unethical.

McClintock was married to Mary Smith of Trenton, N.J. They had two children, one dying in 1869 and the other in 1891. His wife died on May 28, 1872, and he, on October 18, 1881, both being buried in Ronaldson Cemetery, Philadelphia.

Little is recorded of McClintock's methods of teaching and conducting the school. His opinion of the importance of the study of anatomy by the physician is evidenced by a statement in his "Introductory Lecture to the Course of Anatomy and Physiology in the Vermont Academy of Medicine" given on April 7, 1841. He said, "The practitioner of medicine, ignorant of Anatomy and Physiology, is but an experimenting Quack, for how can he know the symptoms endured by the dis-

eased parts, while he is not at all aware of the location and function of such organs in a normal state?" Comments made by him while at Vermont lead one to believe that he followed the same program as his predecessors, a course of lectures accompanied by dissections. In his "Introductory Lecture to the Winter Course of Anatomy in the Philadelphia School of Anatomy," delivered November 2, 1840, he stated that most of the student's knowledge would be acquired by dissections made by themselves. To facilitate teaching them and to aid him, Dr. J. M. Allen acted as his demonstrator. In addition, a regular course of lectures was given three evenings a week during the entire season. Nothing has been found as to the size of his classes. From 1838 to 1839, he charged ninety dollars for his winter course and forty dollars for the spring course, receiving one hundred and ninety dollars from the winter courses. In 1839 and 1840, the fee for the winter course was one hundred and fifty dollars and for the spring course, fifty.

William R. Grant

After McClintock, the school came under the direction of Dr. William R. Grant, who held the western building for the year 1842. Grant was born December 22, 1811, in the Pictou district of Nova Scotia. His elementary education was, in part, received at Pictou Academy under the direction of a clergyman, Thomas McCulloch, D.D. Grant's father hoped that his son might enter the ministry and he did study theology with Dr. McCulloch, the pupil teaching school as well during the first year of his study. He developed chorea and rheumatism and after his recovery decided to study medicine, beginning his instruction with Dr. Alexander McDonald, at Antigonish, fifty miles from his home. To further his medical education, he matriculated at Jefferson Medical College on October 17, 1836 and received his M.D. degree in 1839.

Grant was appointed demonstrator of anatomy at Jefferson Medical College in the winter of 1838–9 and continued until the summer of 1842. Immediately after his graduation, he began the collection of specimens for the Museum of Jefferson Medical College and because of his ability as a collector was appointed Curator of the Museum. September of 1840 saw his marriage to Miss Sarah A. McCallister, a daughter of a well-known citizen of Philadelphia. They had four children, three of whom survived the father. The Pennsylvania College appointed him Professor of Anatomy in 1843, and he subsequently relinquished the School of Anatomy to McClintock. Repeated attacks of rheumatism and the eventual development of cardiac disease caused his death on March 28, 1852. Resolutions were passed by The College of Physicians of Philadelphia and a memoir read by Dr. Washington L. Atlee, Grant having enjoyed fellowship in the College.

Little record of Grant's work at the Philadelphia School of Anatomy has been found, but his career at the Medical Department of Pennsylvania College indicates his competency and abilities. It is said that he was a great favorite with the students, "not an eloquent or elegant lecturer, but was an excellent teacher." The Annual Announcement of the Pennsylvania College in 1844 states, "The anatomical rooms are spacious and commodious with ample accommodations for a large class—the dissections will be made under the personal superintendence of the Professor of Anatomy, who will attend himself to the Demonstrations, aided if necessary by a competent assistant." A similar announcement for 1845 records that a course of six lectures was given throughout the session. The course began with histology or general anatomy of the

tissues and was followed by that of the several systems, i.e., osteology, myology, angiology, neurology and splanchnology. Enlarged anatomical models and accurate diagrams, as well as dry and wet specimens, were used during his instruction. Grant wrote little: "An Introductory Lecture to the Course of Anatomy and Physiology" was presented in 1845 and a "Valedictory Address to the Graduating Class" in 1848. In addition, he wrote a "Sketch of the Life and Character of Samuel George Morton, M.D." Atlee, in his memoir, gives Grant much praise, saying, "His faults were few, his excellences many. In him were well-illustrated the exemplary citizen, the affectionate parent, the kind husband, the skillful physician, the faithful friend and the true Christian."

D. Hayes Agnew

The ensuing ten years, 1852–62, were one of the most successful periods of the school, under the direction of Dr. D. Hayes Agnew. The Agnew Family (Agneaux) was of Scottish lineage and was one of the oldest Pennsylvania families in Franklin County. Dr. Robert Agnew was educated under Dr. Thomas C. James and settled in Lancaster County, where he married the widow of Reverend Ebenezer Henderson. D. Hayes Agnew was born in 1818, secured his early education at a classical academy, Jefferson College at Canonsburg, and at Newark College in Delaware. Studying medicine with his father in 1836, he entered the medical school of the University of Pennsylvania and was graduated in 1838. His talent in anatomy became evident in his medical school days. After graduation, he returned to assist his father in practice at Noblesville. In 1841, Agnew married the daughter of Samuel Irwin, owner of the Pleasant Garden Iron Works in Chester County. In 1843, after the death of his father-in-law, he gave up the practice of medicine and entered the firm. The firm was obliged to assign after the panic of 1837, and Agnew returned to the practice of medicine, settling in Cochranville, Chester County, and beginning the private study of anatomy. In a short time, he journeyed to Philadelphia and located on Eleventh Street near the Philadelphia School of Anatomy. Here he began the practice of surgery, and in a short time, had a good private practice. He took ownership of the school in 1852. Military service began in 1862, and he saw service at the Satterlee, Hestonville and Mower Hospitals. After the battle of Gettysburg, he took care of General Hancock and later, in 1880, Cranfield. Together with Drs. T. G. Morton, W. E. Goodman and S. W. Gross, he founded the Orthopedic Hospital which opened its doors in 1868. Agnew became full Professor of Surgery at the University of Pennsylvania in 1871. A busy life as a clinician did not prevent him from contributing to medical literature. His best work was *The Principles and Practice of Surgery,* published in three volumes. Other publications included his *Dissector's Manual,* a lecture on "The Career of Baron Larrey," a series of valuable papers in the Medical and Surgical Reporter on the "Relations of Anatomy to Surgery and Medicine," as well as a work on the fasciae of the human body. Serving as President of The College of Physicians of Philadelphia, he became the first surgeon to hold this position since Thomas Hewson.

Agnew's course of instruction at the Philadelphia School of Anatomy consisted of lectures five evenings a week from September until March and three evenings a week from April to August. Dissection was done at all lectures, and as the school grew, he added other physicians as demonstrators. In 1854, Agnew added courses in operative surgery which his students could take if they wished. His lectures on

anatomy began with the "constituent elements of the body followed by osteology and syndesmology; next, the apparatus of locomotion; the organs of digestion, circulation and respiration, and finally, the organs of special sense." During his tenure, the income from the school increased considerably, largely because of the increasing number of students. The anatomical class of 1857 contains 94 names, representing 21 different states and the Province of Canada. Two of the members were artists and not doctors. In 1858, there were 180 members, representing almost all of the United States, Canada, and several South American countries. One year later, the number of students increased to 234. The school had earned a fine reputation, not only in Philadelphia, but also throughout the United States and other countries. Its success shows the great ability Agnew had as a teacher and anatomist. D. Hayes Agnew died on March 22, 1892.

James E. Garretson

Dr. Agnew sold the school to Dr. James E. Garretson in 1862, accepting in payment the same amount of money ($600.00) which he originally paid for it. Garretson had for several years assisted Agnew. He was a native of Wilmington, Delaware, where he was born in 1828. He was graduated from the Philadelphia Dental College in 1857 and from the School of Medicine of the University of Pennsylvania in 1859. Garrison states that Garretson was one of the first physicians to take a special interest in oral surgery; in 1869 he accepted the Chair of Oral Surgery at the University of Pennsylvania. Nine years later, he was chosen as Professor of Anatomy and Surgery at the Philadelphia Dental College, becoming its Dean in 1881. Shortly after beginning his work in anatomy and surgery at the Philadelphia Dental College, he recognized the need for clinical and hospital facilities for oral surgery and secured one room in the small building housing the College at Tenth and Arch Streets. It was the beginning of a hospital for oral surgery. With Dr. Garretson, his assistant and a single patient, the hospital started in 1879. In time, Garretson was surgeon-in-chief and associated with him were such well-known surgeons as P. D. Keyster, William Pancoast and H. E. Goodman. Gradually, it became more of a general hospital and was incorporated as Garretson Hospital in 1897. Garretson originated a number of oral operations. His best-known book was *A System of Oral Surgery,* which went through six editions and was highly regarded. He was well-known to the general public because of his non-medical writings. Two of these were *Odd Hours of a Physician* and *Thinkers and Thinking,* both written under the name of John Darby, a pen name used by Garretson. Much is recorded about this surgeon and his work in oral surgery, but little is found about his conduct of the Philadelphia School of Anatomy.

In 1865, Garretson was followed by Dr. James P. Andrews as the owner of the school. Failing health forced him to stop teaching and Dr. R. S. Sutton replaced him for about a year, when he removed to Pittsburgh. Little is known of this short interval in the school's life.

W. W. Keen

The school's growth and increasing reputation stimulated the interest of physicians of note. The year 1866 found it under the direction of W. W. Keen, who became a talented and well-known Philadelphia surgeon. At his eighty-fourth birthday celebration, Keen said, "My ancestor, Joran Kyne (George Keen), following the pilgrims only twenty-three years later, left Sweden in the retinue of John Printz, the first Governor of New Sweden and reached the Delaware River in 1643. He founded the nearby city of Chester. We, his de-

scendants, I think, may fairly claim to be truly Americans." And so he remained throughout a long and busy life.

W. W. Keen was born in Philadelphia on January 19, 1837. Receiving his preliminary education at Central High School and Saunder's Academy in this city, he entered Brown University at eighteen years of age. Four years later, in 1859, he was graduated as valedictorian of his class. After a fifth year, in preparation for his medical studies, he left Brown to enter Jefferson Medical College in 1860. During his stay at Jefferson, he became a private student of Drs. Jacob M. DaCosta and John J. Brinton. In answer to request to furnish a surgeon for the Fifth Massachusetts Regiment in July 1861, Brinton recommended Keen. He was sworn into service as Assistant Surgeon in Washington, July 4, 1861, and sent to Camp Alexandria. Two weeks later, he had his first actual wartime experience in the Battle of Bull Run. Soon after his enlistment expired, he was discharged from the service and returned to medical school, receiving his M.D. degree in March, 1862. Two months later, he was commissioned as Acting Assistant Surgeon in the United States Army and was put in charge of the Eckington Hospital on the outskirts of Washington, later being assigned to Hospital No. 1, Frederick, Maryland. These were the beginnings of Keen's long and successful military career. The following winter, Keen was transferred to the Satterlee Hospital in West Philadelphia, where in one night after the Battle of Gettysburg, he cared for five patients with secondary hemorrhage. Transferred to the Christian Street Hospital in 1863, he became associated with Drs. S. Weir Mitchell and George Morehouse. Keen said later that the most fortunate event in his life was his association with S. Weir Mitchell. Christian Street Hospital was a special hospital established for the treatment and study of diseases of the nervous system. As a result of their work there, Mitchell, Morehouse and Keen published their famous monograph, "Gunshot Wounds and Other Injuries of Nerves," considered one of the most important surgical contributions of the Civil War. It became the basis for Mitchell's later publication, "Injuries to the Nerves and Their Consequences," and an important paper, "Malingering."

Following military service, Keen spent about two years studying in Europe, first as a pupil of Pouchet and later in Virchow's laboratory, getting a great deal of basic training in pathology. Returning to Philadelphia in 1866, Keen began to practice and teach surgery. He taught surgical pathology at Jefferson Medical College and became the owner of the Philadelphia School of Anatomy. Appointed Professor of Surgery at the Women's Medical College in 1884, Keen held the position for the succeeding five years. Upon the death of the younger Gross in 1889, he was appointed Professor of Surgery at Jefferson Medical College and continued until his retirement in 1907.

Several years before this appointment, he had performed his first operation for brain tumor at St. Mary's Hospital in Philadelphia, the patient surviving the procedure for over thirty years. The year after this achievement, Keen reported before the First Congress of American Physicians three patients from whom he had removed brain tumors. In 1893, he assisted Dr. Joseph Bryant in operating upon President Cleveland, the news of which was kept secret for some time because of the political risks. It was later recorded in a little monograph by Keen himself. Space does not permit reciting the many accomplishments of W. W. Keen and the numerous honors presented to him. An abbreviated list includes the presidency of the American Medical Association, President of The College of Physicians of Philadelphia, Honorary Fellow of the Royal College of Surgeons of England, Honorary Fellow of

the Royal College of Surgeons of Edinburgh, and an Honorary Member of the German Surgical Society. Honorary degrees were conferred upon him by Toronto and Northwestern Universities, Yale University, the University of Pennsylvania, and the University of Greifswald. His non-medical interests included being a charter member of Crozer Theological Seminary and a Trustee of Brown University. In 1908, he became President of the American Philosophical Society.

Keen was a prolific writer, publishing many medical papers and books, as well as some writings on non-scientific subjects. He edited *Heath's Practical Anatomy*. About the same time, he published a series of *Charts of the Human Body, The Anatomy of the Optic Chiasm, A Case of Asymmetry of the Skull, A Malformation of the Brain, Anatomical, Pathological and Surgical Uses of Chloral,* and *The Early History of Anatomy*. Two of his best books were *The American Textbook of Surgery,* published with Dr. J. William White, and his eight volume *Surgery,* the last volume of which was published in 1921, each one comprising about one thousand pages. Keen was honored on his 95th birthday in 1932 with a special celebration by those who knew and loved him.

His work at the School of Anatomy was no less prolific or accomplished. He loved teaching and gave the instruction of the students at the school his greatest efforts. His course was similar to those presented by his predecessors. Keen conducted nine winter and five summer courses on Descriptive and Surgical Anatomy, two courses on Artistic Anatomy and thirteen courses on Operative Surgery, besides private courses to numerous students and graduates. Nearly 1500 students attended the school during this period, five of whom became professors in medical colleges and one who opened the first dissecting room in Japan. Students came from every state in the union except New Mexico, from Costa Rica, Nicaragua, Denmark, Norway, Prussia, Switzerland and England. In his own words, "The Philadelphia School of Anatomy has been a fertile foster-mother of youthful teachers, of whom many are now the brightest ornaments of our profession." Following the closure of the school, Keen was Professor of Anatomy at the Pennsylvania Academy of the Fine Arts until 1890. Much more could be said about W. W. Keen, but these things adequately describe the man, the surgeon and the last owner of the Philadelphia School of Anatomy. He closed the school and witnessed the taking over of the buildings for a new postoffice.

The need for lecturers on other medical subjects were recognized and supplied by its directors. Dissection before the students required demonstrators in order that the lecturer might be free for his lecture. Among these were R. J. Barclay, R. J. Levis, William Flynn and John Lodge. Instruction in other subjects included obstetrics by John F. Meigs, surgery by Joshua M. Wallace, chemistry by Robert Bridges, and physiology by Francis Gurney Smith. Hewson, Brinton, S. Weir Mitchell, Alfred Stille and McClellan contributed their knowledge. In 1847 and 1849, Edward Hartshorne gave lectures on medical jurisprudence. Brown-Sequard gave his first lecture in America in these rooms to Gurney's class in physiology. In 1860, and for some time after, Dr. John W. Lodge lectured on experimental physiology in the summer and on urinary pathology in the winter. Dr. Isaac Ott performed some of his experiments on cocaine at the school, as did Dr. Horatio C. Wood, Jr. on veratrum viride.

The development of a school, college or university is a work of years, not a few, but many. In a period such as this, 1820 to 1875, in a young country, the problems were large and the means with which to solve them limited. To advance from individual lectures to a well-organized school

devoted to all aspects of anatomy is in itself an achievement. Much of the school's success came because it was owned and directed by teachers well-informed in anatomy, capable and dedicated to the proper training and education of young physicians. During the ownership of Agnew and Keen, over 2,100 students attended the school, most of them for the entire course. This, in itself, constituted a great effort in medical education for its time. The fact that the school was a privately-owned and controlled institution with reasonable fees and without personal aggrandizement by its teachers indicates the dedication of its teachers toward education of the doctor. The Philadelphia School of Anatomy constituted an important episode in medical education in this country.

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Fig. 1. Portrait of Dr. William Thomson by Thomas Eakins which hangs in Thomson Hall of The College of Physicians of Philadelphia.

The Portrait of Dr. William Thomson by Thomas Eakins[1]

By HAROLD D. BARNSHAW, M.D.[2]

In the rear of Thomson Hall there hangs a famous portrait of Dr. William Thomson painted by Thomas Eakins (Figure 1). Because of its recessed position, it is seldom noted by visitors to the Hall, yet it is the most valued painting of the College and the one most sought by exhibitors. Recently I became interested in this painting, its subject and painter, and now bring them to your attention so that you may also enjoy them.

William Thomson was born in Chambersburg, Pennsylvania, on January 28, 1833, of Scottish-Irish Presbyterian parentage. In 1841 at the age of eight, he suffered from corneal ulcers which restricted him to home for two years. At that time such lesions were treated with copper sulfate and confinement to the house without any reading. During a two-year period, Thomson showed his courage by learning to play the piano by ear. A love of music remained with him throughout his life. Later, when he went to the grand opera in Philadelphia accompanied by his daughter, his distinguished appearance, topped with a red skullcap, made him the cynosure of all eyes. After overcoming the boyhood corneal ulcers, he found that he could read better if he held a candle between the book and his eyes. This made his pupils miotic and so helped to overcome his own high degree of hyperopia.

In 1853 he was graduated from the Jefferson Medical College of Philadelphia and started in general practice in Merion. He was a successful doctor in this suburban area and many of his patients who moved into the city in the wintertime called him in consultation when they were sick. In 1857 he married Miss Rebecca George, a wealthy Quakeress. Four years later, when the Civil War broke out, he joined the Union Army as a lieutenant and served on McClellan's staff in the Peninsula Campaign and at Antietam. He also helped Dr. John H. Brinton, another Fellow of The College of Physicians of Philadelphia, to set up the Army Medical Museum in Washington, D.C. While serving at the Douglas Hospital in Washington, Thomson noticed that flies congregated on the amputation stumps of wounded men and found that if he put creosote dressings on their wounds he not only got rid of the flies but also helped to make them heal more quickly. In association with Dr. William F. Norris, another Philadelphian, he pioneered in photomicroscopy during the years 1863–66.

In 1866 Dr. Thomson resigned from the Army. Three years later he was elected a Fellow of The College of Physicians of Philadelphia and in 1890 was a charter member and first vice president of its newly-formed Section on Ophthalmology. His friend, Dr. Norris, was the first president of the Section. Thomson decided at this time that he would settle in Philadelphia and, after a short time in general practice, chose to specialize in ophthalmology. His association with Dr. Norris and his knowledge of optics and photography made this an ideal specialty for him. He became a successful specialist, with many distinguished patients. He was associated with Drs. S. Weir Mitchell and W. W. Keen in many of their projects. One of his

[1] Section on Ophthalmology, The College of Physicians of Philadelphia, 19 March 1970.

[2] 526 Cooper Street, Camden, New Jersey 08102.

interesting papers written with Mitchell was "Eyestrain and its Association with Headaches," published in 1874. He had also reported on "Diagnosis of Brain Tumor by the Ophthalmoscope" with Dr. Mitchell in the preceding year.

In 1872 Thomson was appointed an attending surgeon at the Wills Eye Hospital, serving in that capacity with other distinguished surgeons there until 1877. In 1896 he was reappointed as attending surgeon. He wished to have this position so that he could use the clinical material at the Wills Eye Hospital to teach his physician-son ophthalmology. In 1873 the elder Thomson joined the teaching staff at Jefferson Medical College and served there through the years until he became full professor in 1895. He spent more of his time at Jefferson Medical College in the practice of ophthalmology than he did at the Wills.

While William Thomson did not write many scientific papers, he was an authority on the optics of refraction and invented new instruments, including a type of refractor. He wrote several papers about the use of the ophthalmoscope and contributed the chapters on ophthalmology to Gross's *Surgery*. An authority on color-blindness, Thomson invented the Thomson stick for its detection. He was a member of numerous professional societies, including the distinguished American Ophthalmological Society and the American Philosophical Society.

Dr. Thomson participated in a variety of extra-professional activities. He was a lover of music and could also paint and use the pencil. He loved to camp, shoot, hike and ride. In his later days, when he could no longer indulge in strenuous sports, he took up cycling and golf.

Thomas Eakins (1844–1916)

Thomas Eakins was born in Philadelphia in 1844. In 1861 he was graduated from its Central High School with a B.S. degree. From 1861 to 1866 he studied drawing at the Pennsylvania Academy of the Fine Arts and anatomy at the Jefferson Medical College. Eakins was a life-long student of anatomy. At one time he considered becoming a physician. He and his students dissected both at the Jefferson Medical College and at the Academy of the Fine Arts. He also wrote papers about anatomy and made many drawings of his anatomical dissections. In 1866 he travelled to France and studied in Gérôme's Classes at the Beaux Arts in Paris. In 1874 he painted the famous Gross Clinic which now hangs at the Jefferson Medical College; at the time it was criticized greatly for the blood depicted on the fingers of Dr. Gross. In 1876 Eakins began teaching at the Pennsylvania Academy of the Fine Arts, and continued to do so until 1886 when he resigned because of criticism of his removing the loincloth from a male model while female students were in the class, to better demonstrate the working of the pelvis.

Thomas Eakins painted not only the Gross Clinic, but also the Agnew Clinic and portraits of many great men in medicine, including Drs. Brinton, Da Costa, Wood, Leidy, Forbes and the William Thomson painting that we have here at The College of Physicians. It is interesting to note that from sales of all of his paintings, he obtained only about $15,000. Many portraits that he painted he gave away. The Thomson portrait was painted in 1907, the year in which its subject died.

To me it seems that the likeness of this distinguished ophthalmologist, painted by a world-famous artist, should be displayed in a more central place in Thomson Hall, on either side of the podium or directly opposite the entrance to the Hall. Also the lighting could be so arranged as to

bring out the highlights of this otherwise sombre portrait.

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The Medical Van Leer Family of Pennsylvania and New Jersey

By DOROTHY I. LANSING, M.D.*

In the early years of the Civil War, the pages of a local newspaper, called *The Village Record* and printed in West Chester, Pennsylvania, were used to print a series of interesting biographical vignettes. Entitled *Notae Cestriensis* (1) and written by Dr. William Darlington (2) and J. Smith Futhey, the vignettes contained information not be be found elsewhere. Dr. Darlington, who was a physician, botanist, author, banker, congressman and historian, clipped out the series and pasted them into a notebook and gave it to the Historical Society of Pennsylvania. J. Smith Futhey, however, went on to publish, twenty years later, with Gilbert Cope, *The History of Chester County* (*3*), and in that work he boldly incorporated, often in toto, *Notae Cestriensis.*

Physicians doing historical research contemporaneously with Dr. Darlington or doing it prior to the 1881 publication of *The History of Chester County* listed this rich source as "Dr. Darlington's Newspaper Sketches." These newspaper sketches often carried intriguing personal titles given to the subjects by Dr. Darlington. "Chester County's Centenarian" was the honor he bestowed upon the memory of 104-year-old Dr. Bernardhus Van Leer (1686–1790). The original composition on Dr. Van Leer, obviously written by Dr. Darlington and published in conjunction with another biography by Dr. Darlington, was printed intact without one word of variation by J. Smith Futhey and then a comment about his progeny was added.

Data on the Van Leers remained sparse or sketchy in the 19th Century (4, 5). In the 1930's, a Van Leer by marriage, Mrs. Ella Wall Van Leer, wife of Dr. Blake Van Leer, President of Georgia Institute of Technology, did extensive genealogical research on the Van Leer family and deposited her original manuscript with the Chester County Historical Society[1]. Philadelphia physicians familiar with the history of medicine in this area were consulted by Mrs. Van Leer. Since some of her information is at variance with that of Dr. Darlington's printed in *The Village Record*[2] of June 22, 1861, and since no corrections were made when his work became part of *The History of Chester County* in 1881, the following pertinent data have been extracted from her manuscript with the hope of stimulating further research into this remarkable American medical family, the Van Leers.

The original emigrant, the founder of the Van Leer family in North America, was Johann George von Lohr (1657?–1748) of Birstein in Prussia, the last of a vanishing line which had apparently originated in Switzerland. In 1698, von Lohr brought himself, his wife, Mary, and his 11-year-old son, Bernardhus, to the New World, having made a prior purchase of 5000 acres of land near what is now Woodbury, New Jersey. The purchase was made of merchant William Welsh of London, apparently upon the occasion of a previous trip to London. Quite naturally, therefore, von Lohr and his family travelled to Philadelphia to inspect and take charge of

* 20 State Road, Paoli, Pennsylvania 19301.

[1] A Xerox copy of the manuscript is on deposit with the Library of The College of Physicians of Philadelphia, with permission of Miss Dorothy Lapp, Librarian, Chester County Historical Society, West Chester, Pennsylvania.

[2] Published by Henry S. Evans, son-in-law of Dr. William Darlington.

their purchase. They chose to remain in Philadelphia (where Mrs. Van Leer felt that von Lohr played the roles of doctor and/or merchant of drugs and where he also had the family name changed back to its Swiss spelling, Van Leer).

The young son, the only son, Bernardhus, grew up and was sent back to Europe to be educated as a physician. Along with Bernardhus, to be equally well educated, went John Worrell of Marple township, Old Chester County, Pennsylvania; for, by that time, the peripatetic Van Leers seem to have purchased land in Marple township and spent much of their time there. Bernardhus spent seven years abroad and returned with learned manuscripts in three languages. He is recorded as purchasing 248 acres of land in Marple township himself in 1720, marrying Mary Branson, daughter of ironmaster William Branson, in 1734, and building a house with the help of the same William Branson on his land in 1742. The house is still standing, having been restored by Mr. Atwater Kent. It is on Sproul Road in Delaware County; for, in 1789, Chester County was split in two to create Chester and Delaware Counties as we know them today, and the Van Leers chose to go into the Delaware County portion at that time.

Did Dr. Bernardhus Van Leer practise medicine in Philadelphia from 1720 to 1734? The answer is elusive. He practised many long years in Chester County but he did so in a fashion very unique for the comparative wilds of that ancient time: he maintained an office practise, exclusively! It was said that he used the difficulties of travel as his excuse for not travelling to the bedside of the patient. Thoroughly upset with this mode of practise used by Dr. Van Leer, Dr. William Darlington remarked in his newspaper article on the man: "The physician must qualify himself for his duties at the bedside of the diseased and can only discharge his responsibilities by personal visitation and searching inquiry in the sick room." His obvious disapproval of the Van Leer technique of medical practise was tempered in print with warmly effusive praise for Dr. Van Leer's personal qualities of abstemiousness and non-gluttony; so, apparently, tippling heavily and eating heavily were the vices that mid-19th Century historians spoke about when looking backward into the 18th Century.

Bernardhus Van Leer died in January, 1790, at the age of 104, two years after receiving a bad beating at the hands of robbers, and was buried in the Middletown Presbyterian churchyard where, in 1815, his second wife, Christina, was buried beside him at the age of 88, having borne him nine children. His first wife, Mary, had borne him six sons. Out of this two-wived progeny of 15 have developed many descendants; but, at present, only his son by Mary, Benjamin Van Leer, is well-recorded. Benjamin was a prominent physician in Gloucester County, New Jersey, where he was very active during the Revolutionary War (6, 7, 8). He left the area to practise in Philadelphia on Water Street near Race Street and he may be easily found in Francis White's Directories of the 1780's (9). He also lived and practised in Chester, where his will was written in 1817. He died, however, in Philadelphia in 1820. The particulars of his medical education are never given; but, with his father doing an office practise, it seems improbable that his son would have received the apprenticeship or tradesman's system adopted by Philadelphians and held in such low esteem by Bernardhus.

The puzzle of relative obscurity for men well-trained in the medical arts is intriguing. The medical career of Bernardhus could have been dictated by his obvious possession of such wealth as the last of the line had garnered. Did he practise as he had been trained to do in Europe in staunch opposition to the way

Philadelphians were practising? A study of the von Lohr family of Prussia who became the Van Leer family in America is in order.

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Memoir of Robert T. M. Donnelly 1884–1969*

By EDMUND B. SPAETH, M.D.

Robert T. M. Donnelly, a retired ophthalmologist, who had retired for only two months, died September 28, 1969, at St. Mary's Franciscan Hospital, Frankford Avenue and Palmer Street. The cause of his death was related to the severe emphysema with which he had been afflicted for several years.

Dr. Donnelly was 85 years old. He had lived at 5205 North Broad Street for many years. For the last ten years of his active life he maintained an office at his home address. Prior to that he had offices in the Medical Tower at 255 South 17th Street and also at 1242 West Lehigh Avenue. Dr. Donnelly was a member of the American Medical Association, the Philadelphia County Medical Society, and The College of Physicians of Philadelphia.

He was born in Philadelphia and obtained his premedical education at the College Military Academy, which was on Spruce Street between 15th and 16th Streets. From there he attended the Jefferson Medical College and was graduated in 1905. Following graduation, he did his internship at St. Mary's Franciscan Hospital, the same institution in which he died years later.

Immediately after the completion of his internship, he joined the staff at the Wills Eye Hospital on the service of the eminent and world-renowned Dr. William Zentmeyer. A great personal relationship developed between these two physicians and continued until the death of Dr. Zentmeyer.

At the beginning of World War I, Dr. Donnelly was commissioned a captain in the Medical Corps of the United States Army and was assigned as an ophthalmologist to the Air Force of the United States Army, which at that time was in its infancy. At the Kelly Air Field in Texas, Dr. Donnelly shared in the original research, then carried out, on the ophthalmological qualifications necessary for aviators.

After Dr. Donnelly's return to civilian life he was appointed to the staffs of St. Joseph's Hospital, Philadelphia, to St. Mary's Franciscan Hospital, Philadelphia, and to the Philadelphia General Hospital. He was also a founding member of the Ophthalmological Club of Philadelphia, which still continues as a very active organization of the younger ophthalmologists of Philadelphia and its immediate environs. During his professional life, first as an active member and subsequent to this as a life member, he continued to be respected and beloved in this organization.

From Dr. Donnelly's early life, even until his very late years of life, he was an ardent sports fan, supporting various Philadelphia teams and leagues. He loved both bridge and poker and was expert in both. The writer remembers with great pleasure many such sessions, especially evenings in the Doctors' Lounge of the Medical Tower. He was a charming, gracious and interested host. It is interesting that of this group of founding members of the Ophthalmological Club there are only two still alive and of these two only one is still in practice.

A Solemn Requiem Mass was celebrated

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

on October 2, at the Holy Child Church, 5200 North Broad Street. Internment was in the Holy Sepulchre Cemetery in Wyndmoor.

Surviving Dr. Donnelly are his wife, the former Mary E. Kane; three daughters, Mrs. Thomas Flannery, Mrs. Edward G. Murray Jr., and Mrs. Robert Koch; one son, Robert T., and sixteen grandchildren.

The writer of this obituary closes it with the following comments: Dr. Donnelly was at all times a perfect gentleman, a very fine and dedicated physician, a most interesting individual and a very dear friend.

Memoir of William Rodger Gilmour 1891–1969*

By SAMUEL X RADBILL, M.D.

William Rodger Gilmour, a Fellow of The College of Physicians of Philadelphia since 1922, was born in the Frankford section of Philadelphia on October 25, 1891. Graduating from Central High School of Philadelphia, he went on to Princeton University where he received his A.B. in 1913. He then entered the University of Pennsylvania School of Medicine in 1915 but after one year left medical school for a year's work in the Graduate School of Arts and Sciences at Pennsylvania. Re-entering the medical school in September 1917, he enlisted in the Medical Reserve Corps at the University and, when the United States became involved in World War I, joined the Students Army Training Corps when it was established. On June 19, 1918, he was awarded the A.M. degree and on June 19, 1919 received his M.D. at the University of Pennsylvania.

After his internship at the Hospital of the University of Pennsylvania, he served on the faculty of his Alma Mater from 1922 to 1930 as instructor in applied anatomy and in 1923 as instructor in normal histology. He also worked at the Wistar Institute of Anatomy.

For over 45 years, until his death on October 27, 1969, he practiced medicine at 6616 Woodland Avenue in Southwest Philadelphia. A member of the Methodist Hospital surgical staff, he published a number of surgical papers, was elected a Fellow of the American College of Surgeons and member of his county and state medical societies as well as the American Medical Association. He was a Mason, active in his local Lion's Club and a loyal member of the Woodland Presbyterian Church.

In 1933 he married Marjorie Roach of Worcester, Massachusetts, a graduate of Pembroke College, who received her M.D. at Johns Hopkins School of Medicine in 1922, interned at Bellevue in New York and at the Woman's Medical College in Philadelphia, and also practiced in this area of Philadelphia. His wife predeceased him in 1966 and he is survived by two sons, George A. and F. L. Patton Gilmour.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Austin Lamont 1905–1969*

By ROBERT D. DRIPPS, M.D.

I miss Austin Lamont enormously, and the sense of loss seems to be increasing although seven months have gone by since three primary cancers finally overcame him. His was a gallant struggle, fought with great wit, understanding and minimal resentment until close to the end.

Austin's career covered some of the Western world's fine educational institutions—Harvard, Oxford, Johns Hopkins and the University of Pennsylvania. He was good to all of them, and good for all of them.

His interests were protean and his taste was catholic. He was a conservationist, a sailor, a benefactor of institutions and individuals, concerned with music, medicine, museums and, above all, education. He believed that world peace was more likely if there could be world union, so he gave generously of himself and his resources to this end.

Dr. Lamont served as Chairman of the Department of Anesthesia at Johns Hopkins School of Medicine until 1947, when he joined the faculty at Pennsylvania. He was a fine teacher and clinician whose warmth attracted students and associates alike. He was a diplomate of the American Board of Anesthesiology, a member of the American Society of Anesthesiologists and a founder of the Association of University Anesthetists.

Born February 25, 1905, he was the son of Thomas W. and Florence Corliss Lamont. Both of his parents were extraordinarily gifted. His father was Chairman of the Board of J. P. Morgan & Company and moved among the greats of his generation. Through his father and mother, Austin came to know John Masefield well and saw a good deal of the Poet Laureate while he was at Oxford. The ironic fact that the poet of the sea got so miserably seasick each time he ventured on it was revealed in one of the Masefield letters turned over to Columbia University early this year by the Lamont family.

Austin Lamont's concern for conservation grew in his later years. He gave an island that he owned off the coast of Maine to the Nature Conservancy and persuaded others including the Charles Lindberghs to do likewise. He and his brother Corliss have also given the Lamont Sanctuary, 25 acres on New York's Palisades to be "preserved permanently in a wild and natural state." His personal life involved a love of the outdoors and he, his friends and his dogs walked daily in the city or the nearby parks of Philadelphia. Much of his thinking was done during these explorations.

He supported the arts with appreciation and discrimination, heading the Board for the New School of Music in Philadelphia for several years, and contributing quietly to the support of many similar institutions here and abroad. He was a member of the board of the Philadelphia College of Art. He was a sponsor of Scholarships for Negro Students at Johns Hopkins School of Medicine.

But it was his personal characteristics that touched all of us and made us better for the contact. His judgment of people was superb and he understood their strengths and weaknesses, identified their problems and sought to solve these with a

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

wisdom that cut to the heart of matters. His kind, often shy, giving of himself was done without display and went out to so many who needed it.

Austin spoke and wrote with clarity, wit and incisiveness. His analyses of difficulties were relevant and human whether these were expressed in conversation or in writing. Perhaps because of his glorious sense of humor, he never took himself seriously and seemed both amused and amazed when we did.

Death came on June 21, 1969. Spontaneously, plans for memorial services arose in three different areas: Philadelphia, Chicago and Vinalhaven, Maine. These simple, moving tributes attended by hundreds from all walks of life attested to the love in which he was held by so many.

Lest this all seem an exaggeration, may I conclude with the following anecdote. Prior to his death, so that Austin might gain strength from the devotion of his friends and realize during his final months how much his life had meant, I established at the University of Pennsylvania the Austin Lamont Clinical Fellowship in Anesthesia Fund. Contributions poured in from more than one hundred fifty donors. From the dozens of heart-warming letters received, I have selected a single phrase. The writer spoke of his gratitude at being allowed to contribute and said of Austin, "... he is a rare and precious man."

Memoir of John McKenney Mitchell 1895–1969*

By PHILIP S. BARBA, M.D.

John McKenney Mitchell was born to Eleanor McKenney Mitchell and the Reverend James Archibald Mitchell in Centreville, Maryland, on September 23, 1895. He was youngest of seven children. His father, James, was the rector of St. Paul's Parish of the Episcopal Church in Centreville and was the son of the Reverend Hugh Mitchell, rector of the Episcopal Church in St. Mary's City, Maryland. John's great grandfather was a captain in the Revolutionary Army; his grandfather, Hugh Mitchell, spent some time in a Federal prison because he spoke out in the pulpit against Federal intervention in the State's voting in relation to its stand in the Civil War. His father, James, and his Uncle Andrew joined the Confederate forces and rode with Jeb Stuart's cavalry. Subsequently, James entered the ministry and Andrew became a physician. In 1910 John lost both parents and lived with an older sister when he was home from school or college.

We might call these incidents the prodromes of the man we knew: a tradition of standing strongly and firmly for what one believed to be right, a tradition of service to one's fellow man, the environment of a small community where the observant and sensitive person can see and understand the problems of those around him, and finally, the loss of both parents forcing an early maturity.

In his last years of college at Trinity in Hartford, Connecticut, World War I drew him into the Army. He enlisted right after war was declared, went to officers candidate school and was among the first group going to France. He was soon made a first lieutenant and then acting company commander when the captain was killed. After the war he returned to Trinity and was graduated with the Bachelor of Arts degree. It required a year for him to decide he wanted medicine and he enrolled in the School of Medicine of Yale University. He was graduated in 1924 with honors and entered a pediatric internship at Yale (New Haven Hospital) and subsequently had two years of pediatric residency in the same hospital. Dr. Mitchell's interest in pediatrics was strongly stimulated by Edwards A. Park, M.D., who was then Professor of Pediatrics at Yale. He was probably also influenced by some dislike of caring for the sick and a feeling that he could do more good in the area of preventive medicine and the care of children.

During his medical student years, John met Eleanor Alderson Janeway, daughter of Dr. Theodore Caldwell Janeway. Nora was in the School of Nursing and they were married during his internship. Their first child, James Andrew Mitchell, was born in 1926 during the residency years and the additional responsibility convinced them of the need to enter practice instead of undertaking further training and remaining in academic medicine which was not financially remunerative.

A brief stay in Centreville led to the decision that they needed a larger community. Nora's connection with the Janeway and Alderson families led them to the Philadelphia "Main Line," where Dr. Mitchell started practice in Bryn Mawr. With the birth of their second child,

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Eleanor Janeway Mitchell, now Mrs. Robert A. Huggins, the Mitchells decided to build the home in Rosemont, where they lived out their lives. As we all know, John was an extremely able and successful practitioner. He was also greatly loved by his patients and their families.

In the period when pediatricians made many visits to the homes, in addition to full office hours, his children saw little of him. His busy practice, his teaching chores at the University of Pennsylvania and his work in clinical research, made- a work load greater than the present "full-time job."

At the outbreak of World War II, Dr. Mitchell again volunteered his services and joined the 20th Hospital Unit from the Hospital of the University of Pennsylvania. When that Unit went to Assam Province in northern India, he went with it as Executive Officer with the rank of Lieutenant Colonel. Later, he was made a full Colonel, the rank he held until his discharge at the end of the war.

At this time he accepted a role in the American Academy of Pediatrics Child Health Survey, first as Executive Secretary of the Pennsylvania Study and subsequently as Associate Director of the National Survey of Pediatric Education. In this Survey he and his wife, Nora, visited every medical school and studied the pediatric curriculum and teaching program. This report, published in 1949 by the Commonwealth Fund had a profound effect on the medical school teaching of pediatrics.

In 1948, after completion of the above Study, Dr. Mitchell accepted the position of Dean of the School of Medicine of the University of Pennsylvania. In this position he coordinated the activities of the basic sciences and the teaching of clinical medicine, together with the burgeoning research that developed with the availability of funds from the Federal government. Such coordination was not always easy.

At the same time he accepted the position of Dean, he accepted the position of Executive Secretary of the American Board of Pediatrics. In this he was strongly assisted by his wife, Nora.

Through his lifetime, John had owned and improved a waterfront farm in Centreville. In 1960 he tendered his resignation as Dean, intending to retire with Nora to the farm. Unfortunately, and unexpectedly, Nora died and those plans were shelved. John was deeply affected and obviously depressed, enough so that his friends were really concerned as his interest in his work and in world affairs seemed to be markedly diminished. This was true until the following year when he married a long-time friend, Harriet Taylor Mauck, who had lost her husband a few years previously. We all saw a marked improvement in John's state of mind, his interest in life and his sense of humor.

After his retirement as Dean in 1962, he took the position of Director of Medical Education at Bryn Mawr Hospital and continued as Executive Secretary of the American Board of Pediatrics.

During his busy life, Dr. Mitchell accepted many responsibilities and received many honors, including the Silver Star as lieutenant in World War I, election to A.O.A. and to Sigma Chi. He received an Honorary Doctor of Science in 1949 from Trinity College, his alma mater, from Dickinson College in 1953, and from Union College in 1958. In 1951 he was awarded the LL.D. degree by Temple University. In 1964 he received the Abraham Jacobi Award of the Section on Pediatrics of the American Medical Association, signifying appreciation of his service to Pediatrics in America. In 1966 he received the Clifford G. Grulee Award of the American Academy of Pediatrics, in recognition of his many contributions to the work of the Academy.

In addition to his membership in our

College of Physicians, Dr. Mitchell was a member of the American Medical Association and its constituent units in Pennsylvania. He was a member of the American Academy of Pediatrics, the American Pediatric Society, the Society for Pediatric Research, The National Society for Medical Research, and The Association of American Medical Colleges. He served as President of the latter and also was President of the Advisory Board for Medical Specialties. John also served as a Trustee of the National Board of Medical Examiners and of the Educational Council for Foreign Medical Graduates.

With this long account of service, achievements, responsibilities and honors one might very well picture a tense, hard-driving person, determined to reach a goal. The truth is quite the opposite. John Mitchell was a man who led by suggestions so sensible and directly useful that one could not avoid following them. High intelligence and quick perception enabled him to see the heart of a problem or a proposal while most others were considering the superficial features. A remarkable skill in organization combined with these qualities enabled him to accomplish much more than the average man. He had the admiration and confidence of his patients and the deep affection of his friends. One had really to know John to appreciate his keen, dry sense of humor and his sympathetic understanding of the problems of others. His warm-hearted dedication was often overlooked because those with casual or business contacts did not see beyond the efficiency.

One man has said, "How unusual it was to have so much modesty and to be so effective." His death is a loss to our profession and a deep and personal grief to his friends.

Memoir of Lewis Cass Scheffey 1893–1969*

By JOHN B. MONTGOMERY, M.D.

Lewis Scheffey's appreciation of The College of Physicians of Philadelphia began early in his career and continued with increasing devotion during the remainder of his life. He was elected to active fellowship on January 7, 1929. However, he had discovered this great library and had used its resources effectively prior to 1925, when he published a review of the world literature on sarcoma of the ovary in teenage girls. From that time on, the College, and especially its library, became a part of his life. He supported its activities with enthusiasm and urged his friends and also his students to take full advantage of the many opportunities that the College provided for the student of medicine.

Dr. Scheffey's official relationship to the College began in 1945 when he was appointed to the Committee on Scientific Business. He served as an elective counsellor, as vice president, and as president in 1955. Doctor Scheffey appreciated the honor greatly. He applied himself to this responsibility with his accustomed dedication and cooperation during the next three years in an effort to solve the many problems that confronted the College. Following his presidency, Doctor Scheffey's interest continued unabated. He served as Censor and as Chairman of an Ad Hoc Committee on Bequests until ill health forced his complete retirement in 1965.

Dr. Scheffey died at his home in Haverford, Pennsylvania, on March 13, 1969, following a prolonged illness due to progressive cerebrovascular disease. A generous bequest in his will attests to the sincerity of his lifelong devotion to The College of Physicians.

Lewis Cass Scheffey, M.D., Sc.D., L.H.D., was born of German ancestry in Hartford, Connecticut, on September 21, 1893. He grew up in Reading, Pennsylvania, and attended the public schools. An after-school job in a local pharmacy, plus the urging of his mother, encouraged his interest in medicine and eventually directed him to the Philadelphia College of Pharmacy. He was graduated with honors in 1915. This background enabled him to earn his way through Jefferson Medical College as an assistant pharmacist while living in the old Department of Diseases of the Chest near Third and Pine Streets. He was awarded his M.D. in June, 1920 and subsequently received a coveted appointment to the twenty-seven-month rotating internship in the Jefferson Medical College Hospital.

Dr. Scheffey's distinguished career in gynecology began almost immediately after his internship, when he became private assistant to Dr. Brooke M. Anspach, Professor and Head of the Department of Gynecology, and soon thereafter was appointed assistant demonstrator of gynecology in Jefferson Medical College.

A forceful teacher and an energetic clinical investigator, he advanced progressively through the academic ranks. In 1940, he succeeded Dr. Anspach as Professor of Gynecology and Head of the Department. When Dr. Norris W. Vaux retired in 1945 as Professor and Head of the Department of Obstetrics, Dr. Scheffey became the first administrative head of the combined Department of Obstetrics and

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Gynecology at Jefferson and Director of the Division of Gynecology. He assumed this additional responsibility with his usual dedication and enthusiasm, while at the same time he carried on an active private practice. Dr. Scheffey strove constantly to improve undergraduate teaching and to develop and strengthen the residency training programs.

Over the years he was admired and respected by many generations of medical students who were appreciative of his fine teaching organization. He was always available for discussion of their personal problems and not infrequently for aid in financial crises. The Class of 1954 crystallized student opinion when they presented Dr. Scheffey's portrait to the Medical College with the statement, "To the students of Jefferson, he will long be remembered not only as an outstanding physician and teacher but also as a sincere advisor and friend."

Dr. Scheffey's lifelong interest in pelvic cancer began when he established the pelvic cancer clinic in the gynecology outpatient department of the Jefferson Hospital in 1928. He gave many hours to this clinic and was personally acquainted with every patient on the rolls. He was proud of the 100% follow-up of these patients over a long period of years. His vigorous teaching, speaking and writing in the field of pelvic cancer won wide recognition.

An early advocate of the value of vaginal cytology in the diagnosis of pelvic malignancy, Dr. Scheffey collaborated with the late Dr. George N. Papanicolaou, Dr. Joe Meigs and several others to establish the Inter-Society Cytology Council in 1951. In 1956 he served as president of the Council which has become the American Society of Cytology.

Dr. Scheffey was deeply interested in the American Cancer Society. After years of service, which included a term as president of the Philadelphia Division, he was awarded the gold medal of the American Cancer Society in 1962 in recognition of his contributions to the diagnosis and control of pelvic cancer.

One of his greatest honors came in 1958 when his teaching confreres throughout the country elected him president of the American Gynecological Society. His presidential address, devoted to the life of Albert Holmes Smith, pointed up Dr. Scheffey's long standing interest in medical history and brought to mind previous papers on the history of the Obstetrical Society of Philadelphia, two of which were published in our *Transactions & Studies.*

Early in his career Dr. Scheffey recognized an obligation to organized medicine. Over the years he served on many committees of the Philadelphia County Medical Society, was a member of the Board of Directors for several terms, and finally served as a very effective president in 1946. In 1958 the Society honored him with the Strittmatter Award for distinguished service to Philadelphia Medicine.

Dr. Scheffey never lost his affection for the Philadelphia College of Pharmacy and Science. He served this fine institution in many ways, while a member of its Board of Trustees for many years.

Many additional honors came to our distinguished Fellow in recognition of a lifetime of service. Among these there were honorary membership in Alpha Omega Alpha, the presidency of the Jefferson Medical College Alumni Association, the presidency of the Obstetrical Society of Philadelphia, the Alumni Award of the Philadelphia College of Pharmacy, and a medal of appreciation from the Japanese Obstetrical and Gynecological Society. In 1943 Ursinus College conferred the honorary degree of Sc.D. and in 1959 Jefferson Medical College conferred an L.H.D.

Throughout his busy life, Lew Scheffey always had time for his family, his friends and his church. He worked hard but had

an enormous capacity to enjoy leisure: reading, travelling, whether to a professional meeting, to visit one of his five children in a far off corner of the globe, or merely walking on the campus of Haverford College across from his home or in the woods of the Berkshire hills where the Scheffeys had built a family cabin. He was a cordial host. A wide circle of friends have pleasant memories of the delightful social gatherings at his home with his wife, Anna, and their children.

Dr. Scheffey's life was devoted to medicine, to Jefferson Medical College and to his family. He worked intensively and he accomplished much.

Memoir of James Shelby Shipman 1898–1969*

By WILFRED E. FRY, M.D.

James Shelby Shipman was born in Holly Springs, Mississippi, on March 12, 1898, the son of William S. Shipman and Lilly Smylie Shipman, and died on January 3, 1969, in Cooper Hospital, Camden, New Jersey.

He was graduated from Millsaps College in Jackson, Mississippi, with an A.B. degree and received an M.S. from the University of Chicago. His medical training began at the University of Mississippi and was completed at the University of Pennsylvania with the degree of M.D. in 1924.

He interned at the Allegheny General Hospital in Pittsburgh and was a resident at the Pittsburgh Eye and Ear Hospital. His residency in ophthalmology at the Wills Eye Hospital in Philadelphia was completed in 1927.

Immediately afterward, he became a member of the staff of the Wills Eye Hospital and was associated with Dr. B. F. Baer in his private practice.

In 1929 he was appointed Chief of the Department of Ophthalmology at the Cooper Hospital in Camden, New Jersey. His appointment as attending surgeon to the Wills Eye Hospital came in 1939 and continued until he was designated consulting surgeon in 1967. He was also consultant to the Retinal Service at the Wills Eye Hospital.

Dr. Shipman devoted many years to the teaching of ophthalmic surgery in the Graduate School of Medicine of the University of Pennsylvania and in 1948 he was appointed Clinical Professor of Ophthalmology in that institution.

He rendered valuable services as chairman of the Board of Trustees of the Camden County Medical Society and as President of the New Jersey Society of Ophthalmology.

Dr. Shipman was a member of the American Medical Association, the American College of Surgeons, the Medical Society of New Jersey, the American Academy of Ophthalmology and Otolaryngology, the Pennsylvania Academy of Ophthalmology and Otolaryngology, the Philadelphia Ophthalmic Club, and The College of Physicians of Philadelphia, where he served as Chairman of the Eye Section in 1961–2.

He was vitally interested in instructing residents at the Wills Eye Hospital and in teaching the students at the Graduate School of Medicine of the University of Pennsylvania. As an expert ophthalmic surgeon, he contributed notably in training residents to become competent surgeons. He was distinguished for his work in retinal detachment surgery and was the first in Philadelphia to become an authority in this field. Many of his publications dealt with this subject. The Retinal Service Department of the Wills Eye Hospital was very appropriately dedicated to him on September 25, 1969.

He served with distinction on many committees of the Board of Attending Surgeons of the Wills Eye Hospital and was chairman of that board from 1956 to 1958.

His interest in the Wills Eye Hospital Ex-residents Society was outstanding; he organized and was responsible for the Trust Fund of that Society. Under his

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guidance the fund developed from $60,000 in 1958 to over $184,000 in 1969. For more than forty years, the residents at Wills knew and appreciated him as a dedicated and stimulating teacher and a loyal friend.

He was an enthusiastic golfer and was a member of Pine Valley and the Seaview Country Clubs in New Jersey.

He is survived by his wife, the former Margaret M. Gilbert; two daughters, Mrs. Susan Hessert and Mrs. Sarah Krusen; five grandchildren; a brother, Austin L. Shipman, and a sister, Mrs. Gordon Cooper.

His death was a great loss to the staff of the Wills Eye Hospital and to ophthalmology in Philadelphia. He gave generously of his time and his talent and made a contribution of excellence and value which will long be remembered.

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Benjamin Rush, M.D.—1970[1]

By DANIEL BLAIN, M.D., LL.D. (HON.)[2]

"To search—to strive—to find and not to yield."—Ulysses.

TODAY we are faced with a rising tide of rebellion against established orders which threatens the traditional bases of national policy, religion, education, both general and specialized, war and peace, and, yes, death, taxes, and motherhood, and we find a leading figure of the Revolutionary era, who was much concerned with these things, chosen by the Lecture Committee to be the subject tonight. The many similarities between the conditions during Rush's professional life (1760–1813) and those facing a young medical graduate today make Rush an appropriate man for this occasion.

It is appropriate to say a word about the donor and the sponsors. In her story (1) of the accomplishments of medical women, Dr. Kate Hurd Mead recounts with bitterness the hostility entrenched in the social atmosphere in Philadelphia, and among the doctors, to the advocates of female medical education. "The doctors who gave their support for the new college lost most of their paying practice as did many other physicians for the same reasons.... In the 1870's, notwithstanding the fact that its professors had been members of the Philadelphia County Medical Society, Woman's Medical College of Pennsylvania was considered 'off-color,' 'irregular,' 'Thomsonian,' 'Hahnemannian' or whatnot. No manner of denial of these charges, nor many urgent invitations to investigate the College's work changed the attitude of the members of the medical society towards the teachers and graduates of the school for nearly 20 years." Benjamin Rush, too, was castigated as a proponent of unpopular causes. One of these was broader education for women (2). His conviction that general education was almost a cure-all for the social ills of the day was second only to his medical concerns. He said in a commencement oration to the Young Ladies Academy of Philadelphia: "Because women marry early, education should be confined to the more useful branches of literature, and to those subjects helpful to mothers, which would concur in instructing their sons in the principles of liberty and government." He advocated a fair knowledge of English, how to read, speak and spell correctly, some knowledge of bookkeeping and arithmetic, of chronology in order to read history, biog-

[1] Kate Hurd Mead Lecture in Medical History XXI, Woman's Medical College of Pennsylvania and Section on Medical History, The College of Physicians of Philadelphia, 5 May 1970.

[2] Superintendent, Philadelphia State Hospital, Philadelphia, Pennsylvania 19114.

raphy and travels with advantage which would make her an agreeable companion for a sensible man. Under no circumstances should vocal music be neglected. "The distress and vexation of a husband, the noise of a nursery, and even the sorrows that will sometimes intrude in her own bosom may all be relieved by song, for sound and sentiment unite to act upon the mind." The address, extensively quoted, subsequently influenced opinion around the country. Although nothing was said about women in medicine, he gave public lectures when Professor of Chemistry which covered subjects never included before in chemistry, such as sanitation, disease, and general science (philosophy).

The College's relations with women physicians were not atypical of the time. Its *Transactions & Studies* make no mention of the Female Medical College in its founding years.

In 1868, the *Transactions & Studies* (3) printed the following passage: "A Fellow introduced resolutions strongly adverse to the study of medicine by females. They were referred to the Council who reported that although it was inexpedient that women should be encouraged to enter in the practice of medicine, yet under existing circumstances, it was not advisable that the College should take action on the question." This report was adopted by a vote of 32 to 8. Three years later, when the same Fellow introduced a resolution censoring the managers of a hospital for compelling their medical staff to deliver clinical lectures to women, the College declined to adopt it. An eminent member of the staff, a Fellow of the College, however, soon afterward resigned his appointment.

It was 60 years after this before Dr. Catherine Macfarlane became the first woman Fellow in 1932. It is pleasant to recall that Dr. Katharine R. Sturgis is now Vice-President of the College, following her highly-acclaimed year as first woman president of the Philadelphia County Medical Society. It takes women of Amazon characteristics to break through these barriers. There are 55 women Fellows at this time, an equitable percentage as compared with the number of women in the AMA, considering the qualifications required. Jefferson Medical College admitted women for the first time in 1968.

This year has seen "the discrimination against men" eliminated from Woman's Medical College and a change of name (4) to the Medical College of Pennsylvania. I am sorry that no recent evidence contradicts the alleged discrimination against women in other medical schools of the country. The psychiatrists of the country are working for greater numbers of women in medicine, believing that the great majority will sooner or later gravitate to this specialty.

Rush was one of the leaders of The College of Physicians, a co-founder in January 1787. He addressed the College many times; in fact, he made the first recorded address (for the first presidential speech was delayed), "The Purposes and Objectives of the College," which he divided into two headings—Its Function as an Organization of Physicians to Promote Their Well-Being, and Its Function as a Scientific Organization for Research and Other Purposes. He was active on committees and elected a censor. His portrait hangs immediately behind the speaker's lectern in Mitchell Hall in the College. Though he held several offices, he was never president. It was with his associates in the College that he engaged in serious and acrimonious controversy over his advocacy of Cullen's, and later, his own system of medical theory, especially his belief in the practice of bloodletting and his continuous vigorous manner of pursuing this objective in the yellow fever epidemics. In November 1793, after seven years, he resigned. His influence was missed; others lost interest; with the passing of Redman, Morgan, Shippen, Kuhn, and finally Rush, the College declined for a period of years.

Years after his death, in 1868, a "Notice of Doctor Benjamin Rush" was published in the *Transactions & Studies* (5), listing few of the bases for his position of leadership and world renown, but not mentioning he was a Founder or that he had resigned.

This appears to be damning him with faint praise, indicative of the reaction of his colleagues at the time of the publication of his monumental book, *Medical Inquiries and Observations upon the Diseases of the Mind* (6), which was reprinted five times, but nevertheless did not elicit more than a single comment from his professional colleagues before Rush's death.

During his life and after his death, Rush's influence dominated the medical world of the United States in its first century, in fact until William Osler came from Toronto to Philadelphia—this in spite of serious criticism, some of which continues to this day, which in the minds of some persons would negate his claim to fame. The sum total of his writings and of others about him exceed those of any other physician of his time, or since, in the United States and perhaps the whole world. After 200 years, comments and events relating to Rush are accelerating rather than decreasing. Since World War II the quality and validity of these comments have been enhanced by increased availability of original source material and the attention of giants in medical historiography, notably Richard H. Shryock and George Washington Corner, both now with the American Philosophical Society in Philadelphia, and L. H. Butterfield and Carl Binger in Boston.

Furthermore, the approaching Bicentennial Celebration brings to the fore the sociopolitical conditions of the Revolutionary period. In this context the patriotic-civic-social contributions of Rush take on a new perspective. His excursions into areas of such great importance today add to his prestige in the Revolutionary period and will increase his prestige in the coming decades of the 21st Century.

Charles deGaulle has written (7): "Leaders of men are later remembered less for the usefulness they have achieved than for the sweep of their endeavors."

It is 25 years since a journal-length evaluation of Rush has been presented. The acceleration of progress and change in these years and the decades ahead make it worthwhile to bring an appraisal of Rush up-to-date in a comparable brief manner.

It is essential, in the flood of praise, that criticisms directed against Rush be given candid recognition within the limits of this paper. This I will attempt in good faith. The reader will understand that I have not been able to resist a sympathetic identification with his struggles and what he tried to do, along with the anchors he dragged as he propelled his ship forward.

I prepare to call attention to 1., recent publications and events (1945–70); 2., Rush's versatile contributions as a patriot, citizen and social reformer; 3., his career as practitioner, teacher and psychiatrist; 4., criticisms with comments; 5., experiences which contributed to his personality and character, and 6., a conclusion.

Recent Publications and Events

Since World War II there has been an upsurge in papers and events related to Benjamin Rush.

In 1944, Rush was the subject of major attention by the American Psychiatric Association in connection with its 100th Anniversary. In 1946, The College of Physicians of Philadelphia celebrated the 200th Anniversary of Rush's birth with a symposium in his honor. The College presented Richard H. Shryock's paper (8) on "Benjamin Rush from a Perspective of the 20th Century," O. H. Perry Pepper's paper (9), "Benjamin Rush's Theories on Bloodletting After 150 Years," and James E. Gibson's paper (10) on "Benjamin Rush's Apprenticed Students." The psychiatrists also selected Shryock, who spoke (11) on "The Psychiatry of Benjamin Rush,"

Adolf Meyer (12) on "Revaluation of Benjamin Rush," and Clifford Farr (13) on "Benjamin Rush, An American Psychiatrist." Also, Shryock contributed the first chapter of the monumental volume, *One Hundred Years of American Psychiatry* (14), entitled "The Beginners: Colonial Days to the Founding of the APA," in which Rush was given major attention. It is significant that the late Edward A. Strecker, then Professor of Psychiatry, University of Pennsylvania, having also been at Jefferson, was president of the Association that year, and that the meeting was held in Philadelphia, the city of its founding. Shryock states that though Rush looked forward in psychiatry, he looked backward in general medicine. Meyer emphasized his contribution to the unity of body and mind and his teaching of psychology in connection with all medical conditions. Meyer also emphasized the need to examine Rush's carefully thought-out lectures to his students and his essays on social reform, rather than depending on repetitious reports by others, and to reconsider his writings in the light of overall impact and influence.

These twin symposia mark the emergence of critical reports by competent authorities both positive and negative. Perhaps the greatest step forward has been the increased availability of basic materials through the publication of *The Autobiography of Benjamin Rush* (15), edited and annotated by George Washington Corner in 1949, containing his *Travels Through Life* and his *Commonplace Book;* and *Letters of Benjamin Rush* (16), edited by L. H. Butterfield in 1951. Butterfield is currently working on the papers and letters of John Adams, which will again throw much light on Rush, a close friend of Adams and Jefferson.

It is interesting to note that Butterfield says, "A single letter by Rush, one of the best he ever wrote, initiated the plan to gather and edit a comprehensive collection of his letters." How often a single observation by a prepared and receptive mind leads to great advance! Grants from the American Philosophical Society provided for the *Letters* but also, most importantly, for the organization of the *Union Catalog of Manuscripts, Publications, and other Materials by and Relating to Rush* which "envisions a permanent repository for information relating to its subject."

This supports the current demand that "controls be extended over the rich and scattered manuscript sources for the study of American history in the same way that has long been done for printed work. The Rush Union Catalog (not yet completed) is a step in this direction and is in keeping with programs undertaken elsewhere for Jefferson, Lincoln, Theodore Roosevelt."

In what good company Rush has found himself! That the American Philosophical Society has moved to make this possible is a silent tribute to the importance of these papers. More than 10,000 items exist. The increase in Rushiana parallels the increase in medical and scientific publications. Publishing has increased remarkably and Rush is more and more a popular subject. A staff member of the Association of American Medical Colleges has estimated there are published now in a year 100,000 articles and books on psychiatry and mental health alone. I estimate about 90% is in the United States.

A succession of other writings has appeared. In 1958 appeared a book, *Verdict for the Doctor—Case of Benjamin Rush* (17), an account of the attacks on Rush with special reference to bloodletting. It details the lawsuit and trial against the English writer William Cobbett for personal slander which Rush, against the advice of his lawyers, insisted upon. He won his case and was awarded $5,000, which he gave to charity.

In 1965, Corner's *Two Centuries of Medical Education* (18) was published on the occasion of the University of Pennsylvania Medical School's Bicentennial, with Rush

mentioned a greater number of times than any other person.

In 1966, Carl Binger, internist, psychiatrist, psychoanalyst and author, wrote *Revolutionary Doctor—Benjamin Rush—1746–1813* (19). In 1967, a Benjamin Rush lecture series was established at the annual meeting of the APA by Hofmann-LaRoche, and in 1968 Reisman and Green (20) produced a book for high school students, *Benjamin Rush: Patriot, Physician, Founding Father.*

In 1969, a paperback reprint of *Doctors on Horseback,* 1937, by J. T. Flexner (21), came out, including a chapter on Benjamin Rush. It contains the 1937 text, a first excursion into medical biography by an art critic, overdramatic and with his bias showing, using the same text without revision, because, as the author said, "No world-shattering new information has emerged in the meantime."

In 1970 appeared the book, *The Manufacture of Madness, A Comparative Study of the Inquisition and the Mental Health Movement* (22), by Thomas Szasz, author of *The Myth of Mental Illness,* which contains a chapter entitled "The New Manufacturer —Benjamin Rush," in which Rush is lumped with the whole of psychiatry in the conspiracy to carry on a work similar to that of the Spanish Inquisition. And in May, 1970, Roy W. Grinker, Sr., the Benjamin Rush Lecturer at the APA Annual Meeting was highly critical of Rush in his paper (23), "The Continuing Search for Meaning." On the same occasion, a laudatory paper (24), "Benjamin Rush and the Negro," was presented by Betty Louise Plummer. In the spring of 1970, Charles Cameron published "Hahnemann and Benjamin Rush—A Reevaluation (25).

I must pay tribute to *Not So Long Ago* by Cecil Drinker (26), published in 1942; *The History of Medical Psychology,* Zilboorg and Henry (27), 1941; *The American Medical Profession,* Henry Burnell Shafer (28), 1936; *Benjamin Rush: Physician and Citizen,* Nathan Goodman (29), 1934; Good's *Benjamin Rush and His Services to American Education* (30), 1918; *Comprehensive Picture of Rush as a Psychiatrist* in 1887 by Charles K. Mills (31); and "Bloodletting in Mental Disorders" by Pliny Earle (32), 1854.

A succession of events since 1960 has brought an increased recognition of Rush. These include the effort by the AMA (1960) to launch a movement to create a memorial to Benjamin Rush, which had been attempted with failure in the 19th Century. Some thought has been given to moving the Statue (1904) of Rush (33) at the Navy Medical Headquarters in Washington to Philadelphia, but the idea has received little encouragement from the Navy. In 1965, the American Psychiatric Association placed a plaque on Rush's grave (34) in Christ Church Burying Ground, Philadelphia. (Rush's pew in Christ Church is between that of George Washington and Robert Morris.) Inquiries (35) show that, except for Benjamin Franklin's, the graves of five other signers of the Declaration, who lie in the same burying ground, also waited until well into the 20th Century for proper marking, the last in 1969. This suggests that signing the Declaration of Independence was not given the prestige, at least in Philadelphia with its many Tories, which we now bestow with such reverence. A new series of medals for patriotic citizens has been struck which includes Benjamin Rush (36). A Benjamin Rush Foundation (37) has been incorporated in Portland, Oregon, in 1967. A Benjamin Rush Middle School (38) has been opened in the Byberry section of Northeast Philadelphia, dedicated recently; and there is the Committee for "Philadelphia—the Shrine of American Medicine," which will plan and execute a memorial exhibit for the bicentennial celebration with Samuel Hadden, M.D. (39), as Chairman, with Rush as a major personage.

But the news item which has brought the name of Rush to the attention of the citi-

zens of Philadelphia most recently has been the effort toward restoration of the birthplace and early home of Rush, the only "Signer" born in Philadelphia and the only M.D. among all the "Signers." As this building gradually deteriorated from nonoccupancy and vandalism within the last five years, Franklyn Clarke, M.D., of Philadelphia State Hospital (Byberry), and the Historian of the City, Dr. Margaret B. Tinckom, began agitating for its restoration. The city being unable to provide the resources, an alternative was put forward to have it moved to the Byberry Hospital grounds four miles away, facing the Boulevard where thousands would pass daily and where perpetual care would be provided by the maintenance staff of the hospital. As these plans were moving ahead, the standing walls were bulldozed down by order of the City's Department of Licenses and Inspection on March 10, 1969 (40). Recovered by some medical detective work, the house now awaits reconstruction. There were reasons why people refused to talk, perhaps because of embarrassment by the city, perhaps because of some shortcuts in legal requirements by the outfit that contracted to do the work. It is of medical interest that the solution was reached when a large file was presented to the bulldozing firm. This showed the importance of the house and of Rush himself to the city and to the whole country. I was able to get to the brother of the elusive owner. He was interested in me as a doctor and brought out the information that his father had been cured of Buerger's disease (42), a rare thing of which he was proud. When I had let it be known that in my early hospital days I had been personally acquainted with Dr. Buerger, I won his confidence. He told me who had done the work. The young man showed me where it was, not in a dump in New Jersey as announced; arrangements were made for all of the stones and woodwork to be dug up, transferred to the grounds of Byberry Hospital, a gift to the Hospital from Korman and Company who owned the land and the house. The Rush House Committee has published its plans in the January 1970 *Transactions & Studies of The College of Physicians.* It is our hope that a faithful reproduction with the identical stones and the woodwork that was left shall be a shrine to the patriots of Revolutionary days, and to the varied interests of Benjamin Rush, with exhibits to show what had since developed in each.

In the last weeks, several chance remarks coming to my attention typified the variety of responses at the mention of Rush's name. An out-of-town psychiatrist: "Who was Rush?" A very senior internist of Philadelphia answered: "Rush? He's that fellow that was such a butcher with his bleeding." A senior psychiatrist wrote to me last week, "When I give the Benjamin Rush Lecture this year, I shall mention his dissociated thinking." A professor of history said, "The Rush materials are the mecca of every historian. No historically adequate biography exists. It would take a lifetime." An obstetrician of Philadelphia at a cocktail party, when I mentioned I was preparing a paper on that controversial man Benjamin Rush, said, "Yes, but when you consider the times in which he lived, what a grand and glorious fellow!" A medical friend in Philadelphia said, "Did you hear? There's another one of these little books, like the *Sayings of Mao Tse Tung* and the *Sayings of L.B.J.* Now it's *Revolutionary Sayings.* And the first quotation is from Benjamin Rush."

"There is nothing more common," Rush declared in a public statement early in 1787, "than to confound the terms of American Revolution with those of the late American War. The American War is over; but this is far from being the case with the American Revolution. On the contrary, nothing but the first act of the great drama is closed. The great work of bringing the principles, morals and manners of our citizens into conformity with Republican institutions remains to be done."

Two quotations give an over-all look at

this man. Butterfield (16), in his introduction to *The Letters of Benjamin Rush,* said, "At the time of his death in April 1813, Benjamin Rush was at the zenith of his fame and influence. Long regarded by everyone, except himself and perhaps a few other Philadelphians, as the leading citizen of Philadelphia, the recipient of uncounted honors from his countrymen and from European courts and learned societies, Rush had achieved a reputation not surpassed by that of any other American physician for a century or more to come. . . .

"Rush's fame sprang from his own vigorous and magnetic personality, from his substantial accomplishments in medicine, psychiatry, education and social reform; from the great body of his published writings; from his gifts as a public speaker, teacher, and lecturer, and finally from the letters he wrote to scores of friends, relatives, patients, pupils and colleagues, on both sides of the Atlantic."

S. Weir Mitchell, President of The College of Physicians at its centenary celebration in 1887, introduced his remarks about Benjamin Rush (43) with the following words: "With reverent doubt of my powers to do justice to the greatest physician this country has produced, I approach the task of briefly recalling to your memory, the vivid and emphatic personality of Benjamin Rush. His life invites a less hasty biographer, and is full of such seeming contradictions, that it can only be explained by the belief that the earnest, decisive, and mutinous nature of a man, proud, rather than conceited, got the better of the principles by which he honestly strove to guide his conduct. That he won at last in this contest was shown by the grief with which a nation mourned his death when the mourning crowds besought the sight of his face, or at least to touch his coffin.

"How shall I briefly bring before you the career of this restless being. Relentless energy drove him through a life in which ardent sense of duty, large-minded philanthropy, love of country, devotion to his art and its science, immense belief in himself, were the motives to industry which made notebooks the companions of his student youth, and which failed not till the pen fell from the hand, enfeebled by the close approach of death."

Rush had a career as physician and citizen and was a crusader in both, and these two were closely intertwined. As a physician, his practice and his teaching was again difficult to separate, for he used his practice to illustrate the points he was making in his teaching, and his case histories were highly illuminative because of his observational powers. He was a product of his inheritance, his early development, the opportunities and demands of the social and historical period in which he lived, and not a little of the geographical locus of his efforts, the city of Philadelphia. He was limited by the scientific knowledge and techniques of the day. He was driven by urges and needs, which showed up in his personality and temperament, and are not too difficult to understand, though no one can properly dissect these matters because of time and distance and lack of personal contact with him. These, we must assume, from the limited evidence at our disposal, propelled him forward to high levels of success, but made him vulnerable to the accusations of serious error in thought processes and judgment, as well as his personal relations. It is the thesis of this paper that closer perusal of source material, a broader look at the times in which he lived and a reappraisal of the values attached to specific elements of praise and blame, in the light of today's conditions and information, will help to reconcile the opposing points of view and will give a balanced over-all view of this remarkable man. This paper can only approach this in part.

Since in the light of today's criteria, Rush's non-medical activities assume greater importance and are little known to

both the profession and the public, I place them first in my discussion.

Rush is known for his crusade in such causes as these: founder and leader of the American Anti-Slavery Association; the freedom, education and religion of Negroes, specifically the founding of the first church for Negroes in the colonies; a life-long evangelical advocate of temperance and personal abstinence from strong spirits, and the proposal of establishments for the cure of alcoholism, to the degree that 100 years after its founding, in which he was associated, the Women's Christian Temperance Union placed a notice on his grave and planted an oak tree in 1883; he was a strong believer that general education was almost a cure-all for social evils; he had much to say about the public free schools, sectarianism, play and exercise, the classics, and he was founder of Dickinson College and co-founder of Franklin College, later Franklin & Marshall; he fought against the death penalty for murder and was an advocate of prison reform; he fought against the evils of tobacco; he advocated a federal university and a Department of Peace in the federal government; a strong defender of the rights of the underprivileged; a member of the Continental Congress, Signer of the Declaration of Independence, organizer in behalf of wartime industry; he was active in securing the adoption of the Constitution in both state and nation, and later in life, reforming the Constitution of Pennsylvania.

Rush's versatility was outstanding in a period when broad interests were common to physicians and to all scientists. This was before the rapid increase of knowledge demanded more narrow specialization. He compares favorably with Benjamin Franklin, his great friend. Shryock has commented that Franklin made excursions outside of his scientific field into public life and never came back. Hence he was involved more in the great events in the development of the republic than Rush. These fields of interest appealed more to the historian, at least up to this time. Hence he was far more well known than Rush, who, however widely he bestowed his attention to social causes, always came back to his major interest, medicine, and the last ten years devoted himself entirely to his teaching, practice, and medical writing. Binger suggests that Rush was too sensitive and not tough enough to withstand the buffeting that goes with public life.

Rush's locus of operation played an important part in encouraging his movement into all concerns of people in line with his own personal propensities. Philadelphia, the capital, the scene of much of the action, is justly known for the participation of its physicians in all manner of important social, civic and governmental activities.

Weir Mitchell in 1887 (43) called attention to an interesting phenomenon which to some degree explains Rush's influence. Mitchell calls attention to the frequent relationship between the development of professional groups with progress and growth of a new country; the Bar, the Army and Navy, and in other lands the Church, have distinct natural relations to the government, but the physician has none (until the British and Russian systems developed—D.B.), and in monarchical countries this fact has served to create for him annoying social limitations which are but too slowly fading as communities grow into intelligent disregard of feudal tradition. His position in any community is a fair test of its good sense, but in new lands more commonly occurs the self-selection of the fittest by those who have the courage of enterprise and the mental outfit to win full success. The physician is sure to take and keep the highest place and to find open to him more easily than to others wealth, social place, and if he desired, the higher service of the state. Nowhere was this more true than in this city, Philadelphia. In New England, the clergy for a long time dominated. In New York, then as now commercial success was the surest road to social position. South of

us it was the landholder who ruled with undisputed suavity, but in this city, I may say in this state, from the first settlement until today the physician has held an almost unquestioned and somewhat curious preeminence. He is and always has been a relatively more broadly important personage here than elsewhere. In Pennsylvania, physicians serve in the legislature, in the supreme court, as directors of insurance companies and saving funds and banks, on collegiate boards, on councils of great charities; the Philadelphia Library Company is obliged under the will of James Rush to have as its directors three physicians. On our hospital boards, and still more largely in our learned societies they are equally well represented. A learned historian in 1828 said, "Nothing struck me so much as the social force and influence of the physician. I was familiar with other cities, but nowhere else have the physicians seemed to me to be so distinctly the leaders of social life."

Dr. Mitchell then mentions physicians Edward Jones and Thomas Wynne who came with William Penn. Wynne was president of the first Assembly in which also sat his son-in-law, Jones. He mentions Thomas Lloyd, a leading Quaker, a physician who "had a great practice . . . and generally good success whereby it was often his lot to be amongst the many of account in the world. . . . Yet being a man of tender spirit he was conscientiously careful over his patients, whether poor or rich. . . . In the new land he sought for conscience sake, he was still for a while a physician. How think you did he find time to act as deputy governor under Penn, President of Council, Keeper of the Great Seal of the Commonwealth. Apparently the good and great William Penn took care of his physician for we hear that his friend, Dr. Griffith Owen, held a post of Member of Assembly, Deputy Master of the Rolls and Commissioner of Property." Mitchell continues, "The exceptional position which we occupy here is in a large measure due to the good fortune which early in our history directed to these shores a remarkable group of physicians, friends and co-religionists of Penn."

Patriot, Citizen and Social Crusader

Participation in the Revolution and Government

Reference to Rush as a patriot and elected official is apropos in this time of protest over all manner of things, including the government. Rush's experience in government covered a period of rapid action in the approaching revolution, a brief military career, and governmental appointments later on. Before going to medical school, he had been aroused by the Stamp Act and sharply criticized the Quaker group for not being equally aroused. In Edinburgh, John Bostock, a fellow medical student, had shown his open disapproval of the monarachy and was so persuasive that Rush returned a rebel and potential activist, ready to catch fire. He was a rebel in medicine, politics, religion and social reform. He met Thomas Paine, helped him collect arguments and materials for his pamphlets, states that he suggested the title "Common Sense," and found for Paine a private printer. He was soon publicly recognized for his sentiments. He kept in touch with the active group, made friends among the national leaders and drove to Frankford to meet the Boston delegation to the first Continental Congress, Samuel and John Adams and others. He dined frequently with these gentlemen and the Virginia leaders, including Jefferson, Washington, Richard Henry Lee, Patrick Henry, and entertained them. In 1775 he was made Surgeon General of the Pennsylvania Navy, a fleet of 13 gunboats built to defend Fort Mifflin and later Fort Mercer, at the approaches to Philadelphia. As a chemist he was able to produce the formula for making gunpowder and thus enabled Philadelphia to make its own, independent of national supply and transportation.

Then occurred a series of events which fit into the great revolution of 1970 and what we are facing literally today.

In brief, the opposition of the Pennsylvania delegation to the revolutionary sentiment of the Congress caused a meeting of citizens in Philadelphia to reject the Assembly at Harrisburg; in fact, the opposition took over the state government and sent a number of insurgents to the Congress, one of whom was Benjamin Rush.

The historian, Goodman (29), describes the events: "On May 10th Congress recommended that the provinces draw up a constitution and the old British charter be displaced by separate state governments. This direct action against Great Britain led the revolutionary group in Philadelphia to agitate against the aristocrats in the Pennsylvania Assembly who were blocking all moves for independence. On May 20th, an immense crowd of 6,000 or 7,000 met in State House Yard, resolved the Assembly was incompetent to rule because its members were elected largely by adherents of loyalist groups while many 'worthy inhabitants' were excluded from the franchise. A committee of patriots under the chairmanship of Thomas McKean was asked to report the next day. After brief deliberation, the committee concluded that the Assembly did not possess the confidence of the people, that it was high time to elect an Assembly of men who would definitely support the movement for independence. A meeting was called a month later to consider the next steps.

"A definite resolution of independence was introduced by Richard Henry Lee, in the national Congress, for the Virginia delegation on June 7th, and the following days found Thomas Jefferson hard at work couching in strong yet simple words a Declaration of Independence.

"The Pennsylvania delegates in Congress voted 5 to 2 against Lee's resolution. This action was too much for the revolutionary Philadelphians. The Whig members voted to withdraw from the Provincial Assembly which, left without a quorum, adjourned never to function again.

"On June 18th, the conference called as a result of the citizens' mass meeting of May 20th met at Carpenter's Hall, presided over by Thomas McKean, later Governor. This revolutionary assembly, expressing the popular will, immediately assumed control of Pennsylvania. Rush had participated in the conference which called for the convention to meet in a month. On June 23rd he offered a motion to draft an address in favor of American Independence, was immediately made chairman of the committee appointed for the task. The subsequent report adopted by the conference on the 24th, submitted to Congress on the 24th, foreshadowed many of the salient points to be set forth in the Declaration of Independence and even much of its phraseology, and anticipated the immortal document proclaimed by Congress on July 4th. If one is to accept as official the action of this illegally elected conference, Pennsylvania actually declared for independence on June 24th due to a report of Rush's committee.

"Rush took his seat in the Continental Congress on July 20 and served nine months. He signed the Declaration of Independence, his name being just above that of Benjamin Franklin. He was appointed to some five committees although he never became a leader and lacked the qualities which made men follow, without question, the brilliant and powerful statesmen who were building a nation, but offered Rush an opportunity for close association with these leaders and for intimate examination of the problems facing them."

The night before the Battle of Princeton he was invited by the council under General Washington to give an opinion on the use of the State Militia, which was followed. He was appointed Physician General of the Middle Division of Military Hospitals. He was involved in severe criticism of the head of the military hospital system,

William Shippen, Jr., a fellow faculty member of the medical school, for what he and others considered to be outrageous conditions in the military hospitals. Failing to move Shippen, he resigned but continued his efforts and finally, failing to get action from General Washington, made the error of criticizing the General to his friend Patrick Henry, writing in his own well-known handwriting, but not signing his name. Henry sent the letter to Washington. Rush was seriously condemned for this and accused of disloyalty to the Commander-in-Chief.

He was also accused of being involved in the Conway Cabal, a group who were actively trying to displace General Washington. Rush was not in any way connected with this and as Goodman says, "His defense of his position was eloquent; his protestation, however, should never have been necessary because, except for his friendliness toward Gates and Conway, there is no evidence with which to link him with their efforts. His greatest crime was indiscretion. He was brusk and outspoken in passing censure on Washington and the management of the army. He was ruthless in condemning Shippen and the administration of the medical department. He was impudent in stooping to anonymity in his personal attack on Washington. Bold, uncompromising, a crusader in spirit, he allowed impulse to overrule prudence and self-possession and even the fact that most of the criticism was justified, did not save him from obloquy." Weir Mitchell in 1887 treats him much more gently and Carl Binger softens the episode by stating that unsigned letters were common practice of the day. But the stigma of disloyalty remained alive for some time. In this day an honest disagreement even with a revered Father of his Country is not so frowned upon. He later was active in the ratification of the Federal Constitution, the drafting of a new State Constitution and a review of it later. He wrote the following articles: "Manners in Government in the United States," "A Plan for A Peace Office in the United States," "Promotion of Suitable Improvements in Government," and others.

Later Rush strongly regretted his time spent in government as a waste of time. He strongly upbraided his son James who decided to accept an appointment in government service. James later had a most distinguished career under five presidents with almost every appointive office in the power of the president, including attorney general and ambassador to England and France.

Education, the Great Hope of Social Reform

Of all of Rush's widespread interests, that of general education was paramount outside of his work as a physician. Goodman (29) in 1934, though disagreeing with Rush's emphasis on sectarianism in education, says, "Rush's general theories of education as well as the specific proposals for instruction, advanced in his letters and essays are, however, often far ahead of his time. Many of his principles are practiced in schools today. He visualized the future needs of the nation's school system with uncanny astuteness."

The fight for the establishment of a common school system in Pennsylvania was an uphill one. Rush wrote essays such as "A Plan for Establishing Public Schools in Pennsylvania" (16). His thoughts on method and technique are expressed in such papers as "Thoughts Upon the Amusements and Punishments which are Proper for Schools," and "A Defense of the Use of the Bible as a Schoolbook." In the fields of organization, administration and curriculum, he covered nearly every aspect of education. He urged the phonetic method of teaching English. He advocated along with Franklin that less time be devoted to classical languages. He suggested that athletics and amusements relieve the student at times from the discipline of study. His essay, "On Conducting Education Agreeably to a Republican Form

of Government," was addressed to the citizens and legislature of Pennsylvania. It outlined a system of education for the new American republic. About this time Rush committed himself to the following: "Republics are slow in discovering their interest, but when once they find it out they will pursue it with vigor and perseverance. Nothing can be done by our public bodies until they can carry the people along with them, and as a means of propagating intelligence and knowledge in our country are as yet but scanty, all of their movements are marked with appearances of delay and procrastination." In January 1787, Rush was one of the first to suggest the establishment of a national or federal university, "where every subject connected with government could be adequately taught." He had the same conflict with the military as is present today, but solved it on a realistic basis, when he asked that special attention be given to military science, inasmuch as it was probable that for some time to come wars would continue "to be the unchristian mode of deciding disputes between Christian nations."

Rush promoted a new college of the west, to be located at Carlisle, and succeeded in getting an appropriation from the Assembly before the war ended, and named the college for John Dickinson, President of the Assembly. He was President of the Board for several years. His selection of the first president for Dickinson College was not a too happy one, and he labored long and earnestly to get Dickinson College through its early years. He was one of the founders of Franklin College, later to become Franklin and Marshall. Rush Medical College of Chicago was named for him. An elementary school in northeast Philadelphia is named for him.

Aging

Another special interest of Rush was the aging process, and over a long period of years Rush gathered material for his paper (16), "An Account of the State of the Body and Mind in Old Age, Observation on its Diseases and their Remedies." From his clinical records he discovered the circumstances which favored longevity. "First and foremost is heredity." He says "I have not found a single instance of a person who has lived through the 80th year in which this was not the case, that is, the descent from long-lived ancestors." He mentions temperance in eating and drinking followed by "the moderate exercise of the understanding of business, politics and religion. It imparts a vigor to the understanding which by being conveyed to every part of the body tends to produce health and long life." Another factor was equanimity of temper: "The violent and irregular action of the passions tends to wear away the springs of life." Marriage is almost essential, thought Rush. He had met with only one unmarried person beyond 80 years. Persons who emigrate to new countries acquire fresh physical and mental vigor from the new environment. Rush did not find that sedentary occupations militate against long life unless accompanied by intemperance. Chronic diseases in themselves do not shorten human life, he held further; nor does the loss of teeth effect the life span to any marked degree. A prematurely bald or gray gentleman may be cheered by Rush's hint that "I have not observed baldness nor gray hairs occurring at early and middle life to prevent old age." He was impressed by the increase of sensitivity to cold and the greater responsiveness to oral rather than visual images in the aged. Franklin, he said, remembered what he heard better than what he saw or read. The appetites of old persons usually increase; the pulse is generally full; the memory is the first faculty of the mind that fails in the declining years, but the fear of death, Rush decided, seems to prevail much less in old age than in early or middle life. That fewer people die of supposedly incurable than of curable diseases was Rush's opinion expressed in a lecture to his students, "On the Causes of

Death in Diseases That Are Not Incurable." He listed as many as 14 causes of death which originate from the sick person themselves, and a number the fault of physicians.

Influence of Body and Mind on Each Other

I am indebted to Binger for calling attention to this material. In his essay, "The Effect of Military and Political Events of the American Revolution on the Human Body," Rush (16) was concerned with how the events of the war could affect the human body through the medium of the mind. Soldiers active in Washington's army, who shared a surprise attack on the Hessians at Trenton, remained in excellent health. He attributed this to the vigor infused into the human body by the victory at Trenton. Binger (19) says, "Such *post hoc* reasoning was characteristic of the period, but the possible value of such observations should not be discounted just because critical proof of their soundness was lacking." After furnishing several other examples, he states that an inquirer after the philosophical truth must consider the passions of men in the same light that he does the laws of matter and motion. This represented a scientific attitude toward human emotions and behavior which would later prove to be the prerequisite for the study of both.

In another lecture on "The Effects of the Mind on the Body," he thinks the influence of the will has not yet been fully explored. He rejected the pretentions of Mesmer with regard to what he called "animal magnetism," but he conceded the facts which Mesmer established clearly proved the influence of the imagination and the will upon diseases. Rush believed that these relationships, if fully explored, could lead to some very important discoveries in the cure of diseases. He urged his listeners to study the anatomy of the human mind if, as he says, "I may be allowed the expression." And he wrote, "The reciprocal influence of the body and mind upon each other can only be ascertained by an accurate knowledge of the faculties of the mind and of their various modes of combination and action."

Environment and Ecology

His interest in environment and sanitation qualify him as a forerunner of the current interest in pollution, environment and ecology. He wrote on "Observations of the Atmosphere from a Balloon Ascension" (16). His interest is shown in excerpts from his writings. He suggests the following as suitable research subjects for the new College of Physicians: secrets of the body that have eluded the anatomists and physiologists of the old world; objects of chemistry, botany and nature, and materia medica abounding in the country; fossils and vegetable substances peculiar to America capable of applying to the purposes of medicine; the winds and their local fluctuations; diet, dress, customs, manners, occupation and buildings as they furnish an opportunity for improvement of pathology; the extent of human life, increased or diminished in America; effects of agriculture, horticulture, commerce in civilization in their progress from first to last stages upon the health and life of Man as that can at present be ascertained; effect of Indian corn, rice, tobacco, and indigo on health; the effect of cutting down of our woods on health; fevers related to the progress of easterly and westerly winds; the influence of culture on civilization; the amounts of rain and snow; the influence of the moon on diseases of the country.

He asked, "Is American health better than other parts of the globe? Do different forms of government have any effect on health and disease?" He questioned such topics as: the effects of labor and learning on health, the effects on health of the increased number of schools and colleges, mixing of human species of different nations, sexual diseases peculiar to our country, vomiting and purging in summer,

causes of decay in the teeth, effects of drafts and cold water on the body, quality of pump water, why south Philadelphia is subject to fevers, how the price of firewood and of fossil coal are determined, records of temperature, quality of water in the rain; he advised keeping accounts of diseases, the erection of warm and cold baths in the city.

He appealed for more air space in the cities, the elimination of narrow streets and alleys, deep lots reserved for yards and gardens for all the residences, and sewers "to convey, when practicable, to running water, the contents of privies and the foul water of kitchens." He went so far as to propose, as William Penn had previously done, that every other block in cities be left unoccupied.

Long before we had any definite knowledge of the breeding habits of the mosquito, Rush demanded that all marshes be either drained or flooded completely, and that after timber land has been cleared, it should be cultivated without delay.

Practitioner, Teacher, Psychiatrist

Practitioner

Rush returned in July 1769 from receiving his medical degree in Edinburgh after brief sojourns in London and Paris. He had received praise for his graduation thesis on digestion in the stomach. With introductions from Franklin and others, he had met the great and near-great in medicine, politics, literature, drama and the arts. He was well-appearing, affable, self-confident. He was ready to throw himself into the colonial scene. He had no money and had to earn a living without delay. He was willing to work hard; he was 23 years old.

He lacked the main ingredients for a quick beginning in practice which he himself described (16) as 1., a medical sponsor to share his practice, 2., proper family background and 3., a religious group of prestige and renown. He was neither Quaker nor Episcopalian; he was Presbyterian and had even left the conservatives and joined the radicals of that group. He later joined the Episcopalians for the sake of his children.

He was appointed by his friend Morgan as Professor of Chemistry at the new medical school, though Redman thought this was premature. But he had the blessing of Edinburgh and London's Fothergill who wrote that he "believed him to be a great chemyst." He became known to the public through public notices of his lectures. He was elected a member of the American Philosophical Society in his first year, addressed them six times and was vice president when he died. Almost immediately he showed evidence of what would be a stormy career. He openly advocated independence from England, and he crusaded against slavery and strong liquor, actions which were unpopular with conservative and wealthy citizens.

Goodman (29) describes the early scene: "Rush, always hot-headed and stubborn, was far from tactful in opposing the medical system pursued by nearly all of his colleagues in Philadelphia. He publicly attacked them, bringing upon his head a mountain of criticism and denunciation. As a result of the controversy the young medico separated himself from many of his colleagues with serious consequences to his private practice. During the first seven years in 'business' not a single physician referred a patient to him." Goodman also says: "A cocksure and self-confident young man, an individualist in all circumstances, he found himself in broad and bitter controversies with older men who quite justly were indignant over the tactics of this mere youngster. The firmer his belief in the truth and justice of his ideas, the more indiscreet and tactless he became in their defense. To the end of his life Rush was conscious of the undying resentment which his early conduct engendered in the minds of his colleagues."

He did have several things going for him. He introduced the Suttonian technique of inoculating against smallpox, which was

simpler and less painful than the old procedure, and rapidly became popular. He says, "I had learned likewise from my master, Dr. Cullen, to give but few medicines in diseases and rely more upon diet and drink (liquids) than has been common in Philadelphia." He paid a great deal of attention to clothing and climate.

Goodman continues: "Obviously there was little left but hard work with the poor. From the Fall of '69 until '76 the doctor toured throughout the day often until midnight and read until 2 or 3 o'clock in the morning. His 'shop' was crowded every morning and at mealtime with poor patients. In the course of a day he visited patients in almost every street and alley in the city." Hard work and a sincere interest in people and demonstrated medical skills were rewarded with a successful practice until the exciting times of the approaching Revolutionary War and serious work with government and military service. This ended early in 1778 on his resignation from the army hospital position. The 1780's found him establishing himself as a leading citizen, physician and teacher. He became a physician to the Pennsylvania Hospital in 1883 and continued for 30 years. The yellow fever epidemic of 1793 found him one of the few physicians staying in the city, seeing enormous numbers of poor and becoming physically exhaused and ill. He was soon embroiled in controversy on the contagiousness and origin of the fever. His view of local origin was viewed as damaging the city's reputation. His belief in bodily contagion was modified later. His suggestions for cleaning up the waterfront, sewages and swamps and sound public health measures were outstanding. He was wrong about origin, for the mosquito was not yet suspect, but his methods would have reduced the mosquito hazard.

The work done by these doctors was often prodigious. Dr. Rush has left us a graphic account of his activities during the yellow fever epidemic of 1793: "Between the 8th and 15th of September I visited and prescribed for between 100 and 125 patients a day. Several of my pupils visited a fourth or fifth part of that number. For a while we refused no calls. My house was filled with patients, chiefly the poor, waiting for advice." Rush became ill with fever, worn out from his labors. These are a narrative of the state of the body and mind of the author during the prevalence of the fever, which is the final chapter in Rush's "An Account of the Remitting Yellow Fever as it appeared in Philadelphia in the year 1793 (41)."

He was publicly attacked for his belief and his treatment methods. So bitter was the antagonism that his practice dropped off and he suffered deeply from the sharp criticism of his erstwhile medical friends; not all, by any means, for many of the leading physicians stuck by him and his position. The yellow fever returned mildly each year, but was again serious in 1797. At that time public criticism was climaxed by the attacks of the Englishman Cobbett (17). He was tempted to leave Philadelphia and go to the new medical school in New York (now College of Physicians and Surgeons, Columbia), but his appointment as Professor of Physic was blocked by the influence of Alexander Hamilton, a federalist who was in violent opposition to Rush, the out-and-out republican.

During the war period when Philadelphia was occupied by the British and he and his family were in Maryland, he courted the idea of deserting medicine and entering the law. He even thought of being a farmer, but with distaste. But the withdrawal of the British permitted him to return. The loss of practice because of the yellow fever episode damaged his financial position which, with a large family and a sister and mother living with him, became precarious. He successfully persuaded his friend John Adams, the President, to give him the post of Treasurer of the Mint (1799–1813). He outlived his enemies and

enjoyed a tranquil period of medical practice, teaching, writing and civic affairs until his death in 1813. He was decorated by foreign governments and achieved international medical renown, but he felt lonesome and isolated in his own city. Perhaps his greatest achievement was in bringing together Jefferson and John Adams who had been feuding over political disagreements. These two enjoyed a constructive and satisfying friendship until their deaths 16 years later on the same day, July 4, 1826.

Historian Goodman (29) states, "Rush himself contributed more than any American physican of his time to the progress of medicine." The recognition of the connection between decayed teeth and disease is one of Rush's outstanding contributions to medical science. He fought strenuously against smallpox and was an early proponent of inoculation and later vaccination. He was indeed one of the first advocates of preventive medicine. He wrote illuminatingly and in detail on the cause and treatment of many diseases, such as hydrophobia, tetanus, fevers, measles, yellow fever, gout, cancer, tuberculosis, smallpox and dropsy. He described cholera infantum in 1773, and left what Binger calls a "classic description."

There need be no doubt as to the courage of Benjamin Rush and of his complete devotion to medicine. His success was enormous. It depended upon extraordinary industry, a good memory and fresh zeal, but not a first-rate intelligence (13). As time passed he became very sure of himself and very much pleased with his reputation as an "American Sydenham" and the "Hyppocrates of Pennsylvania." "Medicine," said he, "is my wife and science is my mistress." Dr. Rush took care of an ancestor of Henry Drinker (26) who recorded in her diary: "In a sickroom he was an artist, deliberate and careful of the feelings not only of the patient, but of the family." One of Rush's maxims in practice was: "Do not condemn or oppose unnecessarily the simple prescriptions of your patients. Yield to them in matters of little consequence, but maintain an flexible authority over them in matters that are essential to life."

Rush as Teacher

Corner, in his book on medical education (18), calls his third chapter, "The War of Independence; Rush in the Ascendant." He says much of Rush, from which I quote the following: "His writings had long since made him conspicuous among his earlier faculty colleagues who published almost nothing. Since 1770 he produced a stream of medical, political and philanthropic pamphlets and brought out in 1789 a volume of 'Medical Inquiries and Observations'. To these he added, in the lean years of 1793 to 1800, three similar volumes, as well as several pamphlets on the cause of yellow fever. A booklet on the 'Evil Influences of Strong Drink' published in 1794 was read everywhere in the states and was reprinted innumerable times. Every year Rush prepared with great care an interesting and beautifully written introductory lecture for the course on Medicine, 16 of which he subsequently published in book form. He followed each of these discourses throughout the succeeding sessions by simple and eloquent lectures on theory and practice."

Rush was an outstanding teacher. He had the gift of dramatizing his subjects. He spoke with authority. His students numbered in the thousands.

Samuel X Radbill (44) says, "Though Rush was often wrong he was never undecided, for which his students as well as his patients adored him." Patients and students expected the doctor "to know" not "to think."

His introductory lectures were designed to arouse the students' interest, stimulate them to work. One of his students, Caldwell, who later became a prominent opponent of his teachings, said that Rush had never taught him anything because he was

always talking about "principles," but in another communication he stated that Rush had taught him to learn for himself.

Rush had a strong belief in teaching "principles," contending those principles could be applied to the observable situations. He used meticulous descriptions of his own patients as examples. He was accused of discouraging unbiased observation and experiment. Farr says, "In a sense Rush's idea is still valuable," quoting Bancroft (1938) who said in *Physiological Function,* "Now the Student is given 'principles;' formerly he was given facts."

He was appointed Professor of Chemistry in the Medical College of Philadelphia in August 1769, one month after returning from abroad. He wrote the first textbook on chemistry in the new world and broadened the subject in the direction of physiology and internal medicine. After 20 years, on Morgan's death in 1789, he became professor of Theory and Practice of Medicine at the Medical College of Philadelphia. In 1792, with the changeover, he became Professor of the Institutes of Medicine at the University of Pennsylvania, and in 1796, following Shippen's retirement, Professor of the Practice of Physic, and by seniority the Dean. He enjoyed his great influence with his students, now distributed over the new nation.

Betsy Copping Corner (45) has this to say about the early days of the first medical school: "Two other young men (after Morgan and Shippen) were soon to augment the faculty. Adam Kuhn, trained by Linnaeus at Upsula as a botanist and by Hope at Edinburgh in materia medica, was elected professor of those specialties in 1768, and the next year, Benjamin Rush, disciple of William Cullen, was chosen Professor of Chemistry.... During a career of more than 40 years, Rush was to distinguish himself as an able practitioner and teacher, a whole-souled patriot, a constructive humanitarian, and contributed to Philadelphia's culture. Kuhn was 28, Shippen 33, Morgan 34, when with young Rush, 23, they united their wisdom acquired by superior training with the strength and ambition of their youth, to make the new school a power in medical education which should, however, lose its impetus as the country grew and other medical schools sprang into being. All these young men had been trained by the keen intellects of the Edinburgh faculty."

A tribute to Rush's influence is shown in the complaint of a modern writer, Edward Louis Bauer (46), who writes on the opposition to the founding of Jefferson Medical School. On January 13, 1826, the University of Pennsylvania presented a memorial to the legislature. Bauer says, "It read to the laity as though the Fathers of Medicine (Hippocrates and Galen) had funneled all of medical lore through the mind of Benjamin Rush and implied the necessity that the University of Pennsylvania must approve or disapprove all schools of medicine in the state. It disapproved of any second medical school in Philadelphia or anywhere that did not teach according to the catechism of Benjamin Rush."

A Description of Rush

"By his very bearing he inspired perfect confidence in his ability. Above medium height, he held his slender body erect and carried himself with dignity. A well shaped hand and long, slim fingers attested to the skill of his surgical technique. His face was long and thin with a high rounded forehead, high cheek bones and firm jaw. The stubborn determination and will with which he faced all difficulties were evident in his strong, well defined features—bright piercing eyes under heavy brows, thin aquiline nose, long upper lip and resolute mouth. In youth he wore a neat powdered wig, but in middle age his rather long, thin gray hair somewhat softened his sharp features. He was always meticulous about his appearance and wore his clothes with an air of elegance (19)."

"By 1809 Rush's lectures were the chief

attraction of the school, with growing audiences of over 300. Students were coming to Philadelphia from all over the country, especially from the southern states and Rush had his pick of them to be his personal apprentices. He never stopped working, seeing patients all day long, lecturing daily in term time and writing every night. He brought out still more volumes of medical essays and the first American textbook of psychiatry. He had become senior professor and the most prolific writer on the medical faculty. A leader of philanthropic activities in Philadelphia, a man respected for his personal bravery in facing deadly epidemic disease, and honored as a Revolutionary patriot, Rush would live down the bitterness engendered amid war and pestilence, and stood at the head of his profession, the most famous physician in the United States."

Judging from his lectures to his students, during the years of the preparation of his life work on mental diseases, Rush seems to have kept up his other interests. Their subject matter ranges widely. There are homilies on the vices and virtues of physicians, on the proper education to qualify a young man for the study of medicine, on the pains and pleasures of a medical life. There are practical discussions on the construction and management of hospitals, with the most meticulous and thoughtful recommendations; on the means of getting business and of acquiring knowledge; and there are critical historical essays on two of his heroes, Hippocrates and Sydenham. The lectures were introductory in nature and designed to arrest and capture the minds of his students and to offer them a model of professional sagacity which they might emulate.

Corner states: "Rush advanced the most controversial idea of the day when he proposed the length of the medical course to three years, not to make room for still more compulsory subjects but to leave time between lectures for the students to attend the practice of their preceptors. There was good reason. Rush had already said in a letter to the trustees he believed that some young men had obtained degrees in our university who did not know how to spread a common plaster, to dress a sore or perform the operation of bleeding and were even ignorant of the sensitive qualities of many of the most common remedies of our shop. He quoted Caspar Wistar that 'not more than one in four graduates of recent years was qualified to practice medicine.' "

In 1910 a chair was endowed in the University of Pennsylvania School of Medicine, "The Benjamin Rush Chair of Chemistry." At that time, Rush was the only psychiatrist for whom a chair had been named. The honor of having the first and only chair of psychiatry named for a psychiatrist was reserved for Kenneth E. Appel in 1968, very suitably in the first medical school in the country, the University of Pennsylvania, and in Philadelphia, the birthplace of psychiatry.

Of Dr. Appel I wrote in 1964 (47), with respect to the launching of the Joint Commission on Mental Illness and Health in 1953 and its sequelae, "This was the true democratic process, where a private citizen, a professional leader and teacher, pointed the way to a great national effort for which the country was ready. Today Kenneth Appel ranks with Rush, Bleuler, Freud and Meyer and is the greatest apostle of social action in mental health the world has ever seen." He is with us tonight. To Dr. Appel, with whom I share this platform, I pay tribute.

The Psychiatrist

It is noteworthy that the first hospital in the American Colonies (1752) was created for "lunatics" and other chronically ill persons. Clifford Farr, of the Department for Mental and Nervous Disease of the Pennsylvania Hospital, the famous "Kirkbride's," summarized Rush's exploits in psychiatry in a most succinct manner, and I quote extensively from his paper for purposes of condensation (13):

"For the thirty years, from 1783 until 1813, that Rush was on the staff of the Hospital, he manifested particular interest in the insane patients. During this period he made valuable observations and kept careful records which were later incorporated in his epoch-making study of insanity. The humane and judicious treatment of the insane, as a method of caring for the mentally ill, recieved the first real impetus through his personal efforts and constant pleading. Almost immediately after joining the staff of the Pennsylvania Hospital, he protested against what he considered cruel and improper treatment of the insane. He hammered at the door of the directors' meetings until he was heard, until adequate accommodations were provided for, and humane treatment was given the insane patients."

Rush wrote the first textbook on psychiatry in 1812, which was reprinted in 1818, 1828, 1830, and 1835. A book by Upham was published in 1840 as part of a family series, but is little known, perhaps as Shryock says, "because he was not a physician." He adds, "It was more intellectual, but less imaginative and inspiring than Rush's book." It was not until 1883 that other textbooks appeared in the United States, by William A. Hammond, E. C. Spitzka and Edward C. Mann (31).

His book, *Inquiries and Observations upon the Diseases of the Mind,* is usually regarded as Rush's chief cause for fame. However, as Farr points out, this is by no means true, for much of his valuable material had been presented over the years in lectures on psychology and mental disorders to his medical students, and contained far more detail. He says, "Rush's discussion of the faculties of the mind, of proximate, remote, exciting, and predisposing causes, is interesting and aside from his fixed opinion (that the seat of madness is primarily located in the blood vessels of the brain) contains many sound observations consonant with the best ideas of the time, some of them still valid.... By theorizing, he fell into more errors than Haslam, Pinel, and others who restricted themselves to clinical and pathological observations.... He exposed a larger surface to criticism. Omitting classical Greek and Latin quotations, he referred to over 75 recent writers, such as Cullen, Coxe, Heberden, Pinel, and others. A touch of modernity is added by his reference to a dozen investigations made at his suggestions by his assistants at Pennsylvania Hospital.... His methodologies were useful, the subject matter frequently trivial." His book was widely quoted, for example, by Esquirol, successor to Pinel, who refers to his work repeatedly in his famous treatise, *Des Maladies Mentales.*

Rush used a variety of approaches to his mental patients, including the recommendation of practically all modalities now in use at the Pennsylvania Hospital. These included exercises, music (he was president of the Uranian Society, promoter of church music), hydrotherapy hot and cold, useful work, occupational therapy, reading, diversion, travel, the use of biographical notes by the patients (abreaction today), all to be summed up in the atmosphere of interest and attention, which later went to the vogue of "moral treatment" and is now rediscovered as "milieu therapy." He experimented with numerous approaches to treatment to relieve "excitement" and "irritation" mistakenly allocated to the blood vessels of the brain. Thus, logically, he used the "gyrator" and the "tranquilizer."

Rush had other forms of treatment more in line with psychotherapy, and has left word about some of them. The first remedy he tells us is to divert the ruling passion or subject which occupies the mind if there be one and fix it upon some others. He asserts that a sudden sense of the absurdities, folly or cruelty of certain actions produced by conversation sometimes cured madness, and also that it has been cured by the influence of the place, time and company on the human mind. The following are some of his recommendations and suggestions:

"Great care should be taken by a physician to suit his conversation to the different and varying states of the mind of his patients. In the fury state they should never be contradicted. In the second grade they should be diverted. When they are upon the recovery we may use reasoning, contradiction and even ridicule.... The return of irregularity and order in the operations of the mind, will be much aided by obliging their people to read in an audible voice, to copy manuscripts, and to commit interesting passages from books to memory.... Terror acts powerfully on the body through the medium of the mind and should be employed in the cure of madness.... Fear accompanied with shame and a sense of pain has sometimes cured this disease.... Convalescence from derangement should be defended from the terrifying or distressing noises of patients in a raving state by removing them to lodges remote from the hospital. A relapse has often been induced by neglect of this principle."

Betsy Copping Corner (45) had this to say of Rush in relation to Shippen, his senior in the faculty, whom he afterward succeeded: "Shippen's work devoted to the overthrow of crippling taboos in obstetrics, was slow, and not as sensationally attractive as the spectacular accomplishments of Benjamin Rush in psychiatry. Rush, with his deep compassion for the insane, recognizing the fundamental humanity of the mentally diseased, their need for humane care and occupation, revolutionized American psychiatry. Shippen was living too eagerly and actively to project a self-conscious image of himself for future generations to admire. His talents moreover, were not those of the investigator who is always asking, why?"

Rush also stressed the importance of the physicians' and attendants' attitudes towards patients: dignity, truthfulness, sincerity, respect, sympathy.

He advocated a species of what is now called "endogenous mental health worker" or "ombudsman" in the image of the ideal "companion," described as follows:

"I cannot conclude this part of the subject of these Inquiries, without lamenting the want of some person of prudence and intelligence in all public receptacles of mad people, who should live constantly with them, and have the exclusive direction of their minds. His business should be, to divert them from conversing upon all the subjects upon which they had been deranged, to tell them pleasant stories, to read to them select passages from entertaining books, and to oblige them to read to him; to superintend their labours of body and mind; to preside at the table at which they take their meals, to protect them from rudeness and insults from their keepers, to walk and ride with them, to partake with them in their amusements, and to regulate the nature and measure of their punishments (sic). Such a person would do more good to mad people in one month, than the visits or the accidental company, of the patient's friends would do in a year."

Perhaps Rush's greatest contribution to psychiatry in the broad sense was in his efforts to educate medical students in psychology as applied to all diseases. His students recorded voluminous notebooks from these lectures, often including as much as ⅓ of the entire contents devoted to the psychological aspects of general medicine. Farr and Adolf Meyer considered his influence on students as one of Rush's greatest contributions.

The June 2, 1921, proceedings of the American Psychiatric Association show: "Dr. Brush moved that the button with picture of 'our psychiatric progenitor'... be adopted as the emblem of the Association." The motion unanimously carried. It has been on the letter-head since that time. Rush's title, "Father of American Psychiatry," was subject to serious question at the time of the Centenary meeting of the Association in 1944, but was vindicated by the

well-known quartet of essayists on Benjamin Rush at the time—Shryock, Corner, Meyer, and Farr.

Criticism and Comment

Rush was fortunate in that he lived through the drastic criticism of the public, of professional colleagues and political enemies. As Binger (18) sums it up: "In his later years, Benjamin Rush's reputation and fame spread beyond the parochial confine of his native state and even across the Atlantic. He became famous not only for his work on yellow fever and for his studies on diseases of the mind, but also for bringing out an American edition of the works of Sydenham, and for many important medical observations. In 1805 he had received a gold medal from the King of Prussia for his great services during the yellow fever epidemic of 1793. In 1807, the Queen of Etruria awarded him another gold medal. And four years later, on the eve of Napoleon's defeat, the czar of Russia sent him a diamond ring. In addition to these honors, the King of Spain ordered the account of yellow fever to be translated into Spanish, and sent his minister, Don Carlos Martinez, to express the royal thanks; and Rush was given diplomas from several literary and philosophical societies in different parts of Europe. He never mentioned these various tributes to more than two or three persons outside his own family, but they were clearly a great source of gratification to him. John Adams had written him: 'Every sprigg of laurel you receive at home or from abroad gives me pleasure because I believe it is well merited.'

"Although he was now more successful in his profession than he had ever been before, more sought after, and both respected and honored, he claimed, nevertheless, to have felt more a stranger in Philadelphia than he would have in London or in Constantinople."

In spite of high praise and insurmountable evidence of impact on the people of the United States and the world, there were and have continued to be strong statements which if true and not balanced by evidence of commendable work in other areas would negate everything that has been said. To give fair appraisal to all aspects of his personality and career requires more space than is available in this essay. With due apologies, a brief attempt is made.

Many sweeping statements have been made. Shryock (8) mentions, for example, Elisha Bartlett of Boston, who in 1828 said, "There is more utter nonsense and unqualified absurdity in Rush's works than in the whole vast compass of medical literature." Yet Lettsom at the same time said, "The Philadelphian combines judgment and sagacity in almost unprecedented degree."

Victor Robinson (8) in 1929 said, "The career of Rush proves that a physician with a facile pen may leave behind him several volumes entitled *Medical Inquiries and Observations,* and not one page of scientific value. There are few medical writers, certainly none of celebrity whose works are less worthy of perusal today than those of Rush." Yet in 1934, history professor Goodman states that Rush anticipated modern medicine in many ways.

Mettler (48), in 1947, in a brief reference says, "Rush's only contribution to psychiatry was of a local executive nature and consisted in his efforts to obtain physical equipment to take care of the insane in Pennsylvania Hospital." She refers to Haywood, who wrote in 1828 words which hardly bear this out. "His *Medical Inquiries and Observations upon the Diseases of the Mind* is principally of interest as the work of the first American psychiatrist to make any pretext at a systematic treatment. The work is not original in nature." But Haywood (49), a former pupil of Rush,

also said, "He was an impressive, eloquent, instructive lecturer," and he is fully aware of how much his labors advanced the cause of medical science. He says, comparing Rush with Pinel, who disagreed with Rush only in part, "And while his opinion, Pinel's, is entitled to respect, it should not be admitted in direct opposition to the fair deductions of reason as well as the experience of Sydenham, Rush, and other enlightened men." He says of the book, "Tho' the present volume contains many useful facts and cases and some ingenious practical suggestions, it has added nothing to the well-earned reputation of the author. There is not a sufficiently clear and connected view of the causes, nature, and treatment of insanity to render it valuable to physicians." (Is this not still true of the psychoses?)

Rush was charged with plagiarism. This was answered by Thomas Mitchell, writing in 1848, who said, "The charge of plagiarism was preferred against him and by someone especially with reference to his book on *Diseases of the Mind*." Mitchell notes that Professor Brown of Edinburgh affirmed that "Rush's works on diseases of the mind are full of instruction and exhibit great originality." Mitchell continues, "It needs no examination of the testimony as to this matter to convince anyone familiar with Rush's treatise of the injustice of the charge, even though much of his material and some of his modes of arrangement may have been drawn from the lectures or the works of others. On almost every page, he gives facts and cases from his daily experience, and even his old facts have been brought together from many sources" (50).

Rush was highly criticized for the development of his system, which critics said was based on faulty reason, unscientific procedures, distorted conclusions. Shafer (28) has commented on the development of these systems, "The scientific spirit which today we associate with the practice of medicine was lacking. A system was built up by a practitioner who worked out the types of diseases and related them to a part of the body or to natural phenomena. Among these theorists, G. E. Stahl, court physician to the king of Prussia from 1716 to 1734, stressed natural cures.... Herman Boerhaave, a professor at Leiden University, who died in 1738, teacher of Redman, believed that disease existed in the blood. William Cullen, a Scotsman, 1710 to 1790, stressed that the nervous system was the source of disease. John Brown, of the Brownian Theory, found that human ailments resulted from general physical weakness. Supporters of these various systems were inclined to bloodletting, purges and emetics in order to drive out the disorder. Then they rebuilt the body by tonics. The procedure was simple enough, but its simplicities derived superficial diagnoses.

"To a profession which accepted these systems almost without question, Benjamin Rush came with an inquiring and critical mind. Naturally he was not alone. Shippen and Morgan have been mentioned, and there were David Ramsey of Charleston, John Warren of Boston, a brother of Dr. Joseph Warren of Bunker Hill fame, and Samuel Bard of New York City, founder of the College of Physicians and Surgeons. These were able physicians, but none were so influential as Benjamin Rush."

Rush was attacked during his life and after his death on the general subject of an unnecessary and frequently harmful use of bloodletting and purging and carrying to an unjustifiable extreme these practices. Against these accusations, he defended himself strongly. Drinker (26) states, "Bleeding had a profound fascination for Dr. Rush. Other physicians were devoted to it, but he was a Sangrado of the Colonies (this allusion comes from Cobbett)." Drinker commented frequently on Rush's great powers of observation but

notes that, on occasion, he made serious errors in his deductions from his observations. Yet he says, "Diagnosis in the hands of these shrewd and experienced men, Kuhn and Rush, were no doubt fairly good. They had no knowledge on which to build. Beginnings of pathology, physiology, biology, chemistry, and bacteriology in the modern sense were 50 to 75 years distant. Not only was their training inadequate, but they went into contests bare-handed. Percussion in the chest was not popular until 1808. The stethoscope was not invented until 1819. The clinical thermometer had no place until 1868. They knew nothing of urinalysis or blood examination."

The most blatant criticism of Rush with regard to bloodletting occurred shortly after the 1797 epidemic and was publicized primarily by an Englishman, William Cobbett. The modifying influence here was not professional but political. Cobbett (17), an Englishman, who had recently come over seeking new careers, became allied with American politics. Enraged at Rush's eulogizing of Rittenhouse and his condemnation of British monarchy (ten years after the war), Cobbett turned on Rush as a means of attacking Jeffersonian democracy in support of Hamilton's Federal Party. Examples of his cutting criticism follow:

MEDICAL PUFFING

The times are ominous indeed,
When quack to quack cries, "purge and bleed."

Those who are in the habit of looking over the gazettes which come in from the different parts of the country, must have observed, and with no small degree of indignation, the arts which our remorseless bleeder is making use of to puff off his preposterous practice. He has, unfortunately, his partisans in every quarter of the country. To these he writes letters, and in return gets letters from them; he extols their practice, and they extol his; and there is scarcely a page of any newspaper that I see which has the good fortune to escape the poison of their prescriptions. "Blood, blood!" Still they cry, "More blood!" In every sentence they menace our poor veins. Their language is as frightful to the ears of the alarmed multitude as is the raven's croak to those of the sickly flock.

And on Dr. Tilton who had supported Rush, he wrote:

"This Dr. Tilton is a kind of Puritan; a sour, wry-faced, incorrigible democrat. He has the pride of Lucifer himself, and to me it is astonishing that he should have condescended to become the trumpet, the underling, the mere barber-surgeon of the master bleeder.

"The mercurial purges, too, Dr. Tilton must break forth in praise of! Mercury is good for everything that is contagious! Is it good for sansculottism, Doctor? If it be, in the name of goodness, take a double dose of it twice a day till it has wrought a cure. Dr. Rush, in that emphatical style which is peculiar to himself, calls mercury 'the Samson of medicine.' In his hands and those of his partisans, it may indeed be justly compared to Samson; for I verily believe they have slain more Americans with it than ever Samson slew of the Philistines. The Israelite slew his thousands, but the Rushites have slain their ten of thousands." (Biblical scholars will note some confusion.)

Dr. Currie, a prominent physician of Philadelphia, joined Cobbett in attacking Rush. In describing his activities, he said: "So much was the Doctor about this period (going back to 1793) possessed with the notion that he was the only man of common sense existing, that he not only refused to consult with any but his former pupils who submitted to obey his dictates, and rudely intruded his advice upon other people's patients. He also appointed two illiterate Negro men, and sent them into all the alleys and byplaces in the city with orders to bleed and give his sweating purges, as he empirically called them, to all they could find sick, without regard to age, sex or constitution; and bloody and dirty work they made among the poor miserable creatures that fell in their way.

"That his mind was elevated to a state of enthusiasm bordering on frenzy, I had frequent opportunity of observing; and I have heard from popular reports that in passing through Kensington one day, he cried out with vociferation, 'Bleed and purge all Kensington! Drive on, boy!' "

Cobbett named Rush the Doctor Sangrado of Philadelphia. Sangrado was the monster in *Gil Blas,* the contemporary Spanish novel. This name stuck and was used by Drinker in 1942 to describe Rush. And Cobbett attacked again:

DYING EASY

Rush having bled a patient within an inch of the grave, and being about to give him the finishing stroke, the relations remonstrated, observing that it was useless for that the poor young man was already dying: "Very well, then," replied the Quack, "it will put him out of his misery, and make him die easy!" And ought butchers like this to be tolerated? These monsters look upon every patient that has the misfortune to fall into their hands, as a lump of flesh and blood on which they have a right to make experiments. A modern philosopher cares no more about the life of a man than about the life of a rat or sparrow. I would caution everyone to avoid the bloody race; but let this caution never be neglected by those who differ from them in politics.

Cobbett was challenged by a law suit for personal slander. Rush had the public with him and got a political break when Judge McKean, who had issued an injunction against Cobbett, became Governor. Jefferson deserted the Federalists and Alexander Hamilton, and a war with France was averted. Hamilton's influence there declined, and as he was the major sponsor of Cobbett, the latter also was reduced in stature. The suit succeeded. A judgment of $5,000 was given to Rush, who gave it to charity. Ironically, Cobbett, who had been a good citizen earlier in England, after returning to England later made a creditable success of himself in public services. His obsession on the monarchy might be said to be the cause of his undoing in the U.S.

The characterization of Rush as being primarily a "bloodletter" has carried through, and many unproved and wholesale allegations were made against Rush on this subject, such as "One of those great discoveries which has contributed to the depopulation of the earth (23)."

What might be considered a useful, conclusive statement by one of unquestioned authority, probity, and judgment was made by Philadelphia's O. H. Perry Pepper (9) as part of the celebration of the 200th year of Rush's birth by The College of Physicians: "From our advantage point, of a century and a half later, it is dangerously easy for us to criticize the efforts of Rush to be as scientific as possible in the light of the knowledge of his day. Granting his sincere belief in the theory of fevers and his accurate observation in the increased thickness of the buffy coat in clotting blood, one can sympathetically understand that logic drove him ineffably to his conclusions and his practice. Rush is by no means the only great figure in the history of medicine to follow, headlong, serious errors logically based on incorrect, but supposedly scientific certainty. The greater the man, the more influential and harmful his error. The great Virchow, for example, delayed many years the advance of medical knowledge by putting his vast authority behind an onerous theory of the metastasis or spread of tumors. Hebra, the great dermatologist, did likewise with his insistence in the last century that chicken pox was not a separate disease, but actually a mild form of smallpox.

"More than likely we are committing the same type of mistake today, perhaps following some misguided leader or with complete satisfaction ordering our practice in some now accepted, but soon to be disproved theory.

"It is healthy for us, therefore, today to reconsider the old theories and practice of Benjamin Rush; to see why he was so sure, to realize how good the scientific evidence of his time seemed to him. Per-

haps he came nearer to the truth than we think; perhaps a century from now exsanguinous bleeding and transfusion will have a larger place in our therapy. None of us can do more than to practice the accepted science of our day and if fortunate to be one of the few to advance it some little. A view of Rush's practice with its seeming excesses should not lead one to a thoughtless condemnation of him, but on the other hand to a greater admiration of him. He was courageous. He was stubborn but he tried to be meticulously scientific. He was opinionated and hotheaded and perhaps would have been mellowed somewhat by an occasional copious bloodletting. Much has been said and written of Benjamin Rush. But the best estimate is that of Samuel Jackson of Northumberland who wrote of Rush that 'he was wonderfully entangled in the web of his honest sophistry.' "

Farr (13) gives us an introduction to a major study of bloodletting in 1854: "Pliny Earle, in an effort to destroy the last traces of Rush's teaching in regard to venesection, felt it necessary to publish one of the most elaborate and well-documented articles ever to appear in the Journal of the Association, a high testimonial to Rush's persisting authority." Some excerpts from this excellent report (32) of opinions over the United States and Europe at that time are useful here to put the whole subject of bloodletting in perspective. His proposition: "To what extent in both frequency and quantity is the abstraction of blood required in the treatment of insanity?" He approaches the subject dramatically, "To bleed or not to bleed. That is the question." And he carried out his objective as he stated "fairly, honestly, dispassionately, impartially." He says: "The doctrines of Dr. Rush and the prevalent practices in our largest establishments for the insane, as they are here represented, how-much-soever the two should be qualified or explained in order to bring them to a parallel proper for exact comparison, present a palpable, broad and to an impartial unprofessional reader, glaring and unaccountable contrast; black and white are scarcely more dissimilar." But his material belies the violent contrast and shows a surprising support of Dr. Rush in the immediate decade in which he lived and the slow change in the direction of cupping and leeching, but no complete break as of 1854 with Rush's major theory that mania was related to inflammation of the blood vessels. It was still held that where the inflammation did exist, venesection and other forms of bloodletting were useful, but obviously being regarded as of less importance. The difference was that whereas "inflammation" was always suspected in mania, it was now thought that "irritation" was probably more likely, and that wherever excitement was evident, it might be due to other things. But where inflammation was present, bleeding should be used. The answers to his question indicated that in America the use of venesection had almost disappeared, but still on special occasions was used, and leeching and cupping were still common. In Europe, however, there was far more tendency to adhere to the general idea that venesection was useful under certain conditions with, however, considerable variations of opinion.

Some examples are given from this monumental work of Earle, which ran for 105 pages:

Esquirol, successor to Pinel: "In youthful and obviously plethoric and in the first period of the attacks, general bloodletting may be ventured on cautiously." Pinel himself earlier had stated, "Bleeding is an unusual evacuation and one which constitutes an epoch in the hospital for the insane."

Another: "In every case of recent insanity which I have seen, local abstraction of blood for the head itself, or contiguous

at the nape of the neck, or between the shoulders has been indicated. The mode has been by cupping and leeching, cupping in the occiput to be preferred. Use of other methods not countenanced today gradually took the place of bleeding." New York State Lunatic Asylum: "Bleeding is sometimes serviceable and necessary at the commencement of insanity." But later from the same hospital, 8th Annual Report: "In no cases have we found local or general bleeding admissible, but on the contrary, nutritious diet and brandy punch are generally demanded. We gave half a pint to 12 ounces of brandy a day and continue it for weeks." In 1850, from Bremen: "Bleeding, although it has been useful at certain epochs, has now become fatal in a majority of cases of insanity, while opium has become more in relation with the convulsive erethism so common in our times."

Very strong evidence in support of Rush's theories comes from Thomas Mayo, London, 1817: "We have never witnessed an interruption of the menses placeable to bleeding; secondly, we should not consider the occasional occurrence of such phenomena as worthy to be weighed against the general importance of bleeding. There is no form of disease in which the depleting treatment assumes so much importance as in acute mania. There it seems to exert great efficacy as a prevention as well as in the cure."

Andrew Combe, 1831, London: "But when we see manifest symptoms of general torpor in young, robust and sanguine subjects, or in females at a critical period, or in those who have lived fully and taken little exercise or have some customary discharge suppressed, or in short, been exposed to some cause productive of fullness, if we do not resort to depletion and evacuation, we not only diminish the chance of recovery, but have the patient exposed to risk of apoplexy or organic or incurable disease."

Another comment generally referring to possible changes in the disease or attitude towards it is as follows: "It has too generally been believed to be a disease essentially asthenic in its character, whereas at least in later years it is in very large proportion of cases asthenic."

Strippling, of Virginia, 1842: "A major evil by general physicians on patients who have been sent to us have been 'well bled, blistered, and purged.' I would by no means assert that cases never occurred, which, if free use of the lancet and other subsitory measures are not absolutely required, or the reverse is the fact. But such cases are comparatively rare."

Esquirol, in 1838: "It is hardly necessary to add that while great caution is required in the use of depressant agents, inflammatory action is in every instance to be promptly met by the use of active and efficient depletion, both topical and general, commensurate with the severity of the case. The most intent, nervous excitement, however, which is sometimes mistaken for cerebral inflammation can never require this treatment."

Contrary to the reports on use of bleeding by Rush, an extremist in Europe, Bosquillon, a fanatical partisan of bleeding, reports his treatment consisted in bloodletting so copious and repeated that they were not stopped until the patient was exsanguinated. Extreme as Rush was, there is no evidence of exsanguination.

The conclusions which Pliny Earle drew from all of his reports were, I think, fair but did not show the black and white discrepancy between Rush and modern practice of his time. They included such comments as these: "Insanity is not of itself an indication for bloodletting, but a contraindication. The usual condition of the brain in mania is not that of active inflammation, but a species of excitement, irritability, or irritation. Such excitement, both mental and physical, can in most cases be permanently subdued by other

means. Yet, insanity may be coexisting with conditions such as positive plethora, and sometimes asthenic congestion, or inflammation which calls for the abstraction of blood."

Earle also concluded: "Venesection in mental disorder should not be absolutely abandoned, though the cases requiring it are very rare. Also, where bloodletting, particularly if local, might be practiced without injury, it is safer and better to treat by other means equalizing the circulation and promoting the secretions and excretions. Physical conditions requiring bloodletting more frequently exist in mania than in other ordinary forms of mental conditions, but insanity following a physical condition should be bled less frequently."

Pliny Earle concludes with a much more conciliatory comment on Rush than that with which he started. "It is not impossible that during the period in which Dr. Rush was in active life, disease in all its forms in this country, not only involved the nervous system less than at the present time, but more seriously implicated the circulation and hence required a more heroic method of attack for its subjugation. It is certainly easier to believe this fact than to concede that an acute and sagacious observer, a learned and profound medical philosopher should have formed and promulgated opinions in regard to the treatment of insanity diametrically opposed to those of many of the most serious physicians of the present day, and so extreme in their character that but few can now approach them to any point of mere proximity."

He was right. Writers quoted above showed that the condition of mania was now interpreted as due to "irritation," not "inflammation." Venesection was withheld for "inflammation" only.

Rush, we now agree, was wrong in his concept of the cause of insanity. But he was consistent with the practices of his day in terms of strongly suspecting the blood and its connections to be largely responsible for most of the disorders of man. Many other theories have had similar origins and fates in connection with new discoveries.

The closing words of this article imply what we all suspect—that the conditions of the times were highly important in determining the logical interpretation of observations that were made; that they should not be judged in terms of current knowledge as to their validity at the time; and that as time goes on, modifications occur consistent with increasing knowledge. He says: "My first impression in regard to the disease were such as to induce a pretty frequent resort to topical bleeding and occasionally to venesection. My practice became, however, essentially modified as my knowledge of the disease increased."

S. Weir Mitchell, who has been quoted above, president of The College of Physicians in 1887 at their centenary celebration, said of Benjamin Rush: "Most of his critics are known only by the greatness of the man whom they criticized, and not for contributions of their own." This applied to the first century, and to some since, but not so in more recent years, particularly since the important papers since World War II. At that time, and since, contributions have been particularly important because of the opportunity to study manuscripts previously unavailable. Consequently, we should pay strict attention to comments by people who are obviously knowledgeable, responsible, and not given to repetition of gossip. I recommend careful study of these, particularly of Binger's excellent biography, well-balanced and not too judgmental, leaving for the reader the opportunity to study the evidence produced.

Two papers on Rush, however, bear criticism which are by men competent in their field, both occurring in 1970, neither of which, however, were careful studies.

Grinker (23) in his paper "The Continuing Search for Meaning," which was the Benjamin Rush Lecture at the American Psychiatric Association, has chosen to castigate Rush directly and by inference in most serious terms. He uses Rush as a prototype to his essay: "A famous man who was afflicted with dualistic forms of thinking, obvious in his ambivalent, contradictory and impulsive behavior, never synthesized by supraordinate control or regulation." His statements are so critical and the author so well-known that this should be made known to the public in contrast to the voluminous constructive comments which also exist. On the positive side, he mentions Rush's role as "Signer" and writer of the first American textbook of psychiatry, as advocate of temperance, abolition of slavery, and better education for women, and as a physicain who established the first free medical dispensary and formulated and modified procedures in all branches of medicine. For psychiatric patients, *in imitation of Pinel,* he recommended clean cells, kind treatment, qualified attendants, and encouragement of psychotic patients to write down their thoughts. He attempted to improve or reform the prison system. Psychiatric therapy included a tranquilizing chair, other mechanical restraints, when necessary, submergence in cold water, gyration to produce blood to the head. In his textbook, he insisted there was *one disease* and *one treatment* for the etiology of convulsive action in the cerebral capillaries. Treatment was *severe purging and excessive bloodletting,* which he also advocated for yellow fever. In 1843, these treatments were repudiated as *utter nonsense and unqualified absurdity,* condemned as *one of those great discoveries which has contributed to the depopulation of the earth.*

Grinker continues, "In contrast to his zest for reforming were evidences of Rush's authoritative nature; at least, they represented a dualistic form of thinking despite their rationalization." Rush was described as "controversial, unpopular, lacking resilience, and making few compromises; complex, devious, sensitive to the point of paranoia; he is dogmatic as shown by his belief that psychiatry is the most important branch of all sciences, most certain of all knowledge, and the most useful." He is praising Rush with faint damns.

He then recognizes the contradictions attributed to Rush and attempts to explain them: "Dreams indicated *desire for supreme power* and *recognition of his impotence;* he advocated humanitarian reform but *did untold damage to his patients;* he taught clinical observations as the basis of medical science, yet was *dogmatic and unscientific in his writings about theory and practices;* he *disavowed history* and *repeated its errors;* he urged the study of mathematics yet had no capacity to utilize its methods in thinking about or in producing scientific advances." (What clinicians do today?)

Grinker charges that Rush used dualistic forms of thinking never synthesized by supraordinate control or regulation. He states later that the Western world has been dominated by European dualism for two centuries. Studies on a dozen famous men showed that only three understood unitary thinking. Rush was in good company, dualistic as he may have been. In three and one third double-spaced pages he has capsuled the complete story of Rush with *general statements, unauthenticated quotations, errors in his information* (as shown in the italicized words, *my own*). He states that this paper is written "from the framework of our current value systems." *Res ipsa loquitur.*

Charles S. Cameron, the eminently successful president of Hahnemann Medical College and Hospital, has written, in the spring of 1970, "Hahnemann and Rush—A Reevaluation" (25). This is an interest-

ing and valuable contribution in terms of the medical worlds in which these two men lived, and in developing the great achievements of Hahnemann which are not well enough known, for many reasons, and deserve to be much more greatly appreciated. Rush is credited with two major errors to which we agree. These are, first, his system of medicine announced and developed from 1789 on and second, the fact that he sent out his students over the United States practicing "the heroic treatments recommended by the master which consisted largely of bloodletting and purging." There is no new charge against Rush which has not been described many times, but there is a failure to include, except in some brief allusions, all else that was related to Rush, such as his genuine service over a broad field as a patriot, citizen, and social crusader, his broad practice as a practitioner of medicine and public health, aside from bloodletting and purging, his teaching of medicine and psychiatry, and the over-all sweep of his influence.

In comparing the two, Cameron suggests that Rush was swimming with the stream of medical thought but that Hahnemann swam upstream against it and should deserve greater credit for his accomplishments. Actually, Rush did exceed certain elements of the stream which turned out to be in error, and these are the two that were mentioned. On the other hand, he also swam with the great stream of service to the country and particularly fitted into the social climate of the revolutionary era. His two errors gradually faded and are of little consequence today, but his main contributions live on. He had more strings to his bow. Hahnemann made magnificent contributions which continue on in certain attitudes and trends which are monuments to his discoveries, persistence, and successes. It seems unnecessary to compare the two. Though living in the same period of time, they were in different worlds. Neither should suffer or gain in comparison with the other.

Shryock (11) has traced both error and gain in Rush's system, including his observations, theoretical constructs and conclusions. He found that Rush's theory of mental illness started either in body or mind; for example, on the psychological side, anger could cause somatic changes in the brain (hypertension) which then produced mental illness. On the other side, a physical condition could also produce changes which could in turn produce mental illness. He says that this is the language not of consistent materialism but rather "common sense" or Cartesian dualism. Shryock presented his materials, which were discussed by Adolf Meyer, in commemoration of the 100th anniversary of the American Psychiatric Association. The increasing efforts to distinguish specific diseases in terms of distinct symptoms or syndromes had "gone haywire" in nosology's listing hundreds of supposed diseases—hence, the beauty of reducing all these names to mere variations of one basic pathological condition. He likewise knew that lesions found at autopsy were also beginning to be used as clues to specific diseases; but he cited such findings rather as proof of his generalized tension hypothesis.

"The lure of this, his monistic pathology, was supplemented by the appeal of a similarly monistic somatic therapeutics deduced therefrom. If all illnesses were a form of tension, all could be cured by that which would relieve tension—namely bleeding. Anyone could see that if a patient were bled long enough he would relax sooner or later. Here again Rush's credulity is evident. He frequently claimed to have cured mental illness, like other conditions, by a single course of bleeding. Such achievements were then in turn offered as proof of the validity of the original pathologic theory.

"Despite his fondness for this theory and the related bleeding, however, Rush by no means limited his therapeutics to somatic procedures. Here his dualism proved of real value. If some mental conditions had a psychological origin, then these might be treated, at least in part, by psychological methods. Before noting what these were, observe another concession that the physician had to make at this point. Just because he recognized two distinct origins for mental illnesses, he had to distinguish two types of diseases in terms of these causes and then his clinical experience suggested various subdivisions of these two classes, which he related to the conventional distinctions between understanding emotions and will. Thus, the very man who denied any meaning to somatic nosology became involved in the even more difficult field of psychiatric nosology. In a word, while maintaining a generalized pathology and therapeutics in the somatic realm, he employed what he at least thought were diverse, specific concepts in dealing with psychiatry. Here the dualism in the medical approaches resulted from or at least paralleled his underlying philosophical dualism.

"The psychiatric disease classifications employed by Rush . . . were as confused as the others of the time (these were to some extent deciphered by Farr), but were used as a framework in discussing types of cases and also the psychological treatments which were employed. Here his own observations came into play, and from the midst of speculation there emerges at times a clinician of real stature."

Further criticism of Rush is taken up in the following passage: "It is apparent that this physician possessed both the virtues and defects characteristic of the greater part of the late 18th Century medicine. In ignoring research in local pathology and research for specific somatic diseases, he was holding to the oldest speculative tradition, and thereby missed the very opportunities which proved most promising in the ensuing century. His great influence may have delayed progress in pathology in Philadelphia and other American centers, so that these awoke after 1825 to find themselves far behind Paris in this advance.

"On the other hand, and just because Rush avoided the approach noted, he likewise escaped the exaggerated emphasis upon localization and specificity that dominated medical thought for at least a century after his time. He viewed his patients physically as a whole. Moreover, because of his dualism, he transcended an exclusively somatic outlook in psychiatry and was interested in personality as well as in the total somatic picture. Like other 18th Century leaders, he lectured to medical students on psychology, a practice that largely disappeared thereafter."

Shryock summarized: "One might almost observe of the somatic theory that if the versatile doctor was the precursor of anything, it was of such later monistic sects as osteopathy and chiropractic, but in the mental field there is real justice in his title 'Father of American Psychiatry.'" Shryock adds in a note: "This is not quite the whole story, however, for as noted, his over-all view of the patient had at least potential merit and in some instances his clinical insight into somatic conditions was probably sound, for instance, in his observations on focal infections."

Adolf Meyer (12), writing at the same time and with the benefit of Doctor Shryock's manuscript, opposed Shryock's view of Rush's dualism when he says, "As a teacher, Benjamin Rush left no doubt as to what he wanted to have his students and physicians know and practice—man is a single and indivisible unit." Rush said, "Man is said to be a compound of soul and body. However proper this language may be in religion, it is not so in

medicine. He is, in the eye of the physician, a single and indivisible being, for so intimately united are his soul and body that one cannot be moved without the other. The actions of the former upon the latter are numerous and important. They are causes of many diseases; and if properly directed, they may easily be made to afford many useful remedies."

Meyer says, "Shryock belittles somewhat when he speaks in his manuscript of the later disappearance of the practice of lecturing to medical students on psychology. Yet this is exactly where the birth of a biological concept of psychology was at work in Rush's mind. In that process so faithful and really illuminating, described by Zilboorg in his *History of Medical Psychology*, as the sort of psychology that came from actual contact with living beings—calling for a pathology from *life* rather than mainly from the corpse and producing in Rush's common sense a deep and persistent fundamental feeling of a close interconnection even between the 'physical causes' and the 'moral faculties' with a definite espousal of what Rush saw also as 'life' of the actual individual."

It would appear that there may well be a semantic difference at work and no real controversial issue.

Shryock says, "An interesting essay could be prepared on the history of the literature about Rush, and this might throw as much light on changing medical perspectives over the years as on the physician himself.

"A more balanced view after the 40's and 50's in which French ideas persisted may show that during the present century as medicine returned in some degree to 18th Century concepts, the attention recently accorded his work in psychiatry affords an obvious illustration of the renaissance of appreciation. In certain aspects Rush's view no longer seems so strange to present medical thinking as it did to those of 1850.

"It has already been implied that although Rush looked backward in his theory of disease, he was modern in the sense that certain of his 18th Century views have been revived during our own time. His concentration on 'excessive action' in the vascular system seems analagous to the concern now accorded the whole 'hypertension' complex (1946). The two theoretical schools of earlier centuries seem to be replaced at this time with humoral and tension hypotheses. Even Rush's doctrine of disease unity had the merit of viewing the patient as a whole—the merit that was lost in much of the 18th and 19th Centuries when emphasis on specificity was carried to extremes. His concern with psychosomatic relations is an excellent illustration in this connection.

"Rush illustrates 18th Century practices which were largely lost only to be revived in recent years. The first trait was that versatility which was so typical of 17th and 18th Century thinkers: Franklin, Jefferson, Benjamin Thompson, William Charles Wells. It was easier to be versatile when science and learning were relatively non-technical. Rush's type of mind would be most helpful today in what is termed 'cross fertilization' or the breaking down of departmental barriers. The second practice which Rush well illustrated in his day, for which there is now a renewed demand, was the active participation by scientists in public affairs.

"The moral of all this is that Rush was more modern in many ways, as a medical man and as a scientist, than we might at first suppose upon dipping into his lectures and essays. The most famous American physician of his time, he did much to establish a great medical tradition in this city. Despite scientific and human limitations, he remains a striking figure in whom Americans in general and Philadelphians in particular may well take an unaffected pride."

On the personal side, there have been comments which should be mentioned. In the "Notice of Dr. Benjamin Rush (5),"

it was stated that "Dr. Rush possessed quick perception and a good memory; he was an early riser, persistently industrious, facile in the use of language and writing, conversation and public speaking. He had a gentleness of manner with distressed persons, kindness to poor, faithful attachment to the sick, all of which united in procuring for him the esteem and respect and confidence of his fellow citizens. In spite of his general benevolence, he was dogmatic, impatient of contradiction, often unreasonable and resentful." Farr says, "Among his faults were pride, an eye to prosperity, irritability, sensitivity, loss of judgment and a sense of proportion in the heat of conflict." Farr says that his "conscientiousness, methodical industry, religious and reforming zeal, logical but dogmatic reasoning, humanitarianism were products of his ancestry and early education. To some of his contemporaries the odd mingling of these characteristics made him appear hypocritical but he can be cleared of this charge. He acquired a host of enemies but the enmity was usually limited to the occasion."

Butterfield (16) expressed an opinion: "The transitional state of medical science itself was in part the reason for the contentiousness of physicians in Rush's days. Certainly doctors quarreled in Boston, Cincinnati and London as they did in Philadelphia in the early 19th Century. That consideration will not account for Rush's frequent involvement in disputes outside his profession. The truth is that Rush was a pugnacious and domineering man."

For reasons I am not competent to consider, he seemed to invite controversy. In a letter to John Adams, he said, "During the whole of my political life, I was always disposed to suspect my integrity if from any accident I became popular with our citizens for a few weeks or days." But, his talent for making friends was at least as extraordinary. Hundreds of his former pupils remained devoted to him and continued to consult him. With very few exceptions, the friendships he made among the political and military leaders of the Revolution thrived in the years that followed. A man who could remain on intimate terms with men of such diverse character and political views as Adams, Jefferson, Pickering, Dickinson, Gates, Green, Madison, Peters, Wade and Rittenhouse, did not stand alone against the world.

Shryock suggests, "Such conflicting opinions, persisting over so long a period, suggest we are dealing with changing scientific perspectives but also with an unusually positive personality. This personality was so sincere and devoted, yet so self-assured and aggressive withal that he has continued to make friends and enemies throughout these many years. Hence there remains room for honest differences of opinion about Rush."

Character Development

It has been a common thought that Rush's total personality and the elements which made him such a controversial figure must have had relationship to the well known facts of his inheritance, growth and development. Binger has gone further than most in discussing Rush's dreams, for which I refer you to his book. These use of course, certain materials not available to the ordinary perusal of the manuscripts.

With this in mind, I have brought out certain elements of his early years which I believe are important. The facts are well known to all, but certain emphases have been brought out in my summation which will reflect my own belief in some of the more important elements.

Rush's ancestors were dissenters, companions to Cromwell and William Penn, who came to the new world in 1683. They settled at Byberry, northeast of center city,

in a house built about 1690 which was bulldozed in 1969.

Rush was the oldest of five children. His father died when he was six, and he exchanged the quiet home of a farmer and gunsmith for the precarious support of his widowed mother in the heart of the city near the waterfront. His father had been known for his quiet integrity and honesty. There was some land but little cash. His mother was a strong, intensively religious woman, graduate of a good boarding school, who put her children through school by selling groceries and spirits. She had been married previously to an alcoholic, who had died. Benjamin later became a champion of the temperance forces.

He married an extremely able and devoted woman who was also intensively religious, distinguished as one whose father and husband both signed the Declaration of Independence. She outlived him by 30 years. More stable and sensible than he, she was always loyal to his successes and was a comforter when he was severely criticized. His brother became a lawyer who achieved the Supreme Court of Pennsylvania. A cousin was a leading sculptor in the city. His mother's sister had been married to Rev. Dr. Finley, head of the Nottingham School in Maryland where the leading families of Philadelphia sent their young men and where several future leading physicians were at the same time. It was a strongly religious Presbyterian school. Benjamin was sent at age seven and stayed until he was 13 (1753–59). He and his brother found there a satisfying home and he, a foster father, who had great influence on Benjamin. Dr. Finley later became president of the College of New Jersey at Princeton. The headmaster was gentle and kind, but demanding of hard work, religious acceptance and serious attitudes, who used shame rather than a cane to put over his principles, perhaps with more devastation. Benjamin, not a shooting enthusiast, became an observer of the countryside; throughout his life, his observations inspired his imagination.

He worked hard enough to enter Princeton, graduating before his 15th birthday. There he also had a high-minded and much admired mentor, a Presbyterian minister to whom he was closely attached, who when he had exhibited an interest in reading advised that he keep notes of all he read and observed and, when he showed a facility for public speaking, urged him to go into the law. Rush agreed and looked for a leading lawyer to be his preceptor. Perchancing to travel by his former school, his old master warned him that law was "full of temptations." He advised physic, and Rush agreed. He had first wanted to be a preacher, so he at the age of 13 began to be torn between ministry, law and medicine, coming to a decision at the time of his graduation. He showed some trivalence over these matters in his later years. (Cotton Mather, and Oliver Wendell Holmes had the same conflict of interest in the church, law and medicine. Martin Luther, whose biography compares with Rush, had to choose between law and the church.)

His association with churches showed a wondering, questioning nature, and he shifted into a more liberal branch of the Presbyterian Church, then to the Episcopalian and back again to the Presbyterian for the sake of his children, finally ending up an Episcopalian. He had pews in Episcopalian, Presbyterian and Baptist churches so that he could attend services when visiting the homes of his patients nearby. He died as a member of Christ Church, and his body lies in Christ Church Burying Ground. The Presbyterians, one can assume, exhibited a tremendous passion for piety, authority, punishment and retribution, demanded of themselves and of their parishioners faithful adherence to a predestined fate, ordered by an

avenging and anthropomorphic god. They were kind, just and humane, but firm, rigid and strong, with confidence that they were carrying out the wishes of almighty God and that there should be no swerving from the path. Dr. Alan Gregg (51) is remembered as saying, "There is nothing so terrifying as a group of Presbyterian elders rising from their knees in prayer and determined to do their duty." Rush had to be identified with much of this, but he had a very strong humane interest and was a great reformer with special interest in the poor.

He was fortunate in a sense to be delayed in his desire for a wealthy practice and forced to work with the poor. The poor gave him his clinical experience, and they stood by him throughout. Corner suggests that "he expressed the wonder that is fundamental to his nature, eventually leading him away from Orthodox Christianity, the religious doctrine of inextricable retribution for unrepented sin, toward universalism which allowed him to hope that even the most depraved sinner might escape the torments of hell."

It might well be argued that the intensity of his religious faith had much to do with his rigidity and refusal to compromise and made him persist out of all reason, but it may well be also that this fundamental faith furnished the strength and determination of his character. Corner says furthermore, "It was this spirit of humanity more than reasoning that made him a democratic friend of the Negroes and a reformer of prisons and asylums. If he seems a little too well aware now and then of this virtue, if he records (in his *Commonplace Book*) with a touch of unction his gifts to prisoners in jail or his remission of the medical fee of some poor invalid, you must remember he was communing with himself."

We are reminded by that relentless critic, Dr. Thomas Szasz, that there is one essay of Rush that is never mentioned and which Szaaz says belies his interest in the Negro. This was his speculation as to the cause of the black pigmentation of the Negro, and he considered leprosy as a possible cause, and on that basis made some remarks about those who were carrying an hereditary strain of leprosy and therefore should not reproduce. This was one of his many speculations, a large proportion of which, of course, he did not carry through.

Rush returned to his decision to study physic. Asked by the president of Princeton, Dr. John Redman agreed to take on the young man. Redman was wise, kind, but demanding of meticulous, meritorious and unending labor, and has been described by Binger as a man of "restless energy," the same words which Weir Mitchell applied to Rush. Redman was highly respected, a leader of the upper class of Philadelphia society, with a large medical practice. It was a far cry from Rush's tradesman's farmhouse to the mansions where the rich lived, such as "Cliveden," "Stenton," "Strawberry Mansion," "Lemon Hill," or even the less pretentious "Belfield," which Charles Willson Peale bought in 1810.

Under Redman he was so promising a student that he was within two years given almost unsupervised responsibility for patients. He showed signs of being driven by an inner force which demanded full time and almost obsessional devotion to unremitting work with no money and a growing ambition, which Binger has developed beautifully through his work on one of Rush's dreams. This was fed by an emerging capacity to deal with illness and with patients. He literally was in his master's house, with only a few hours off, for six years. There is no mention of his family during this time. His mother later entered her third marrige. This marriage was, like the first, with an alcoholic, and accompanied by much unhappiness. After 18 years she, a widow for the third time, came

to her son Benjamin's home to live. His description of his reactions to her death reveals a more than usually intense relationship. In his apprenticeship to Redman, Rush attended lectures by Morgan and Shippen and Kuhn at the Pennsylvania Hospital, then followed the leaders of Philadelphia medicine to Edinburgh, a privilege usually reserved for the sons of the wealthy.

During the last month of his apprenticeship, he was with Dr. Finley, his uncle and revered mentor, whom he attended during the final weeks of his illness and for many hours until being present at his death. Finley had in the meantime left Nottingham School and become president of the College of New Jersey. Binger notes that this event marked the end of a chapter for Benjamin Rush; and even before that the hidden man in him began to emerge and showed a concern for public affairs and a bent for controversy which would characterize him through much of his later life.

He must have mixed socially during these years for he took with him to Europe letters of credit and introductions from Benjamin Franklin and others which opened his acquaintance to a list of highly placed Scottish, English, and European leaders, medical and otherwise. Once, while in Scotland, he exhibited a remarkable talent of persuasiveness both in writing and speaking directly. When he was asked by influential Presbyterians in Philadelphia to help persuade the Reverend John Witherspoon to leave his parish in Scotland and become the next president of Princeton College, this he accomplished when official correspondence had failed. Witherspoon also became a Signer of the Declaration of Independence. He is remembered well with a statue in Washington. It is likely that Rush's relationships with higher education had much to do with his founding of Dickinson College as well as his support in founding Franklin and Marshall College, and in fact his interest in general education. This also probably influenced him in his conviction that sectarian schools were the only solution for the future, though that opinion changed toward the end.

His possessiveness, rigidity and autocracy with regard to his sons is shown in his instructions to his son James on going abroad as a student: "1. Commit yourself and all that you are interested in daily to the protection of your Maker, Preserver and bountiful Benefactor. Keep a journal ...Avoid lodging in houses where there are handsome young ladies. Avoid particular attentions where you visit. 2. Attend public worship. Attend the Courts, General Assembly and Debating Societies. 3. Converse on medicine with physicians as much as possible. 4. Keep in a separate book an account of your expenditures, contracts, etc. Preserve all your receipts. Also finally recollect the saying of Sir John Baynard to his son when he set out on his travels: 'Remember while you are in the world the world sees you.' Also the saying of Israel Putnam to your father in 1766: 'Keep older and wiser company than thyself.' Also of George Dilwyn to B. Chew Jr.: 'Remember thou hast a character to lose.' "

Conclusion

We have for our contemplation a very complex individual who combined enormous success with obviously serious personality traits. He went through a period of controversy with many groups, partly because of his humane understanding of the problems of society, weaknesses in technical theory and practice of medicine, a tendency toward observation and inquiries along many lines which induced him to move in many directions. His versatility and obligation to respond to all subjects and questions made him liable to carelessly thought out statements and excursions into fantasy, shortcuts to logical

reasoning in his conclusions. Softened by conflict and controversy over the years and wearied by demands on his physical and emotional energies, by his unceasing devotion to the needs of mankind, he was fortunate in living through this period and having another fifteen years or more of relative peace and quiet. He used this time to continue his writings and his extremely valuable contributions to the art and content of teaching. His major critics and his major associates, more important than he in his early days, such as Morgan, Shippen and Kuhn, died or retired early in relative unhappiness or obscurity. He alone of all of the great leaders persisted for a long enough time to allow the impact of his great service to his profession and humanity to solidify itself and create a basis of influence which has now shown up in the increased interest in Rush so obvious today.

Binger, an astute critic, gives a balanced picture: "Most writers refer to Rush's preeminence, calling him the greatest physician in the United States. Perhaps his greatness lay in his limitless energy and his capacity for empathy with all suffering people. In spite of his therapeutic procedures, which often seemed medieval and even preposterous, he had a grasp of the environment in relation to the organism and the organism's adaptation to the extraneous conditions of life. This was in advance of his time. In fact, one of the most striking qualities of this versatile man is that he lived simultaneously in several centuries. Rush was an 18th Century man, but he lived as well in the 16th Century and even in the 20th."

A final thought can be appropriately injected here. I refer to the obvious impact of Rush on his patients in terms of their confidence and trust in him. He may not have been aware of this, but in effect he was using what is now referred to as the "power of the placebo," the use of powerful suggestion, perhaps more important than the intellectual meaning of words in attempting to explain or persuade. If it is true that this element has been shown to produce results with inert chemicals, e.g., the "sugar pill" or the reverse of accepted physiological action in well known drugs in severe pain, surely Rush, who was so sure of himself, may have been speaking truly in reporting improvements in his patients regardless of the logic of the therapy used. He speaks of faith cures. His statement, "Hope may be considered as the diet of the mind in sickness," remains a sermon in itself for all medical practitioners.

In this day of great demand for all persons of all ages to come to the aid of their country to help solve the extraordinary problems of this day, the efforts of Rush and his unlimited capacity for devotion to the great causes of the day, and especially his interest in education, aging, public health and ecology, would make him, if he were alive today, a most useful member of the medical profession, citizen and crusader. Selections of his writings should be published in paperback.

We need men of his stamp who follow the tradition of Ulysses, "to search, to strive, to find and not to yield."

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Daniel Blain, M.D.: A Biographical Sketch[1]

By KENNETH E. APPEL, M.D.[2]

DANIEL BLAIN, M.D.: President of the American Psychiatric Association. Distinguished physician of Philadelphia. Member of the staff of the oldest hospital in the United States, the Pennsylvania Hospital.

This is the saga of a man of good will, of social conscience and devotion, of medical and psychiatric skills, of kindness, of indefatigable energy, of willingness and capacity to try the new.

Robert L. Robinson[3] believes he has been an essential force in the following developments which have taken place in recent years in American Psychiatry:

1. The rapid growth in membership of the Association.

2. The Mental Hospital & Community Psychiatry Institutes.

3. The realization of the manpower shortage as a fundamental problem in mental health.

4. The evolution of modern community psychiatry. He was among the earliest to preach the importance of this in his state surveys of mental health needs and resources.

5. The development of good press relations, establishing a dialogue between psychiatry and the American people.

6. The founding of the Joint Commission on Mental Illness and Health.

7. The establishment of a national A.P.A. headquarters in Washington.

8. The furtherance of psychiatric education through the early education conferences.

9. Making California one of the outstandingly progressive states in psychiatry.

10. Developing better liaison and relationships with many other professional and civic groups.

Dr. Blain has felt that his most important contributions to psychiatry, to medicine and to society have been the following three:

1. A three-day conference of the Council of the American Psychiatric Association in September, 1964, discussing the extent to which the Association is organized and operated to meet the on-going and emerging needs of the nation. Signals were being received from society. Great expectations were expressed that the Association could exert an important influence in the solution of the nation's problems. It was recognized that these problems are beyond the immediate psychiatric field and go into general medicine, sociology and anthropology, problems such as the population explosion, urbanization, automation, wasted manpower, explosions of violence and hate, poverty, discrimination, and the like. This conference affirmed the responsibility of the A.P.A. for contributions to solving the social problems that are hard pressing our nation. It was decided that committees should be developed and ways and means found to advance community psychiatry and mental health. The speech of President Kennedy in February of 1962 was the result of a tidal wave of social, medical and psychiatric concerns that had been accumulating since World War II, pointing to the need of community mental health programs. This represented a new challenge in community psychiatry, to implement the principles and suggestions

[1] Section on Medical History, The College of Physicians of Philadelphia, 8 February 1966.

[2] Professor Emeritus, Department of Psychiatry, The School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; Consultant, Medical Staff, The Institute of the Pennsylvania Hospital, 111 North 49th Street, Philadelphia, Pennsylvania 19139.

[3] Editor, Psychiatric News, American Psychiatric Association, 1700 18th Street, N.W., Washington, D.C. 20009.

developed by the Joint Commission on Mental Illness and Health, the essence of whose recommendations President Kennedy supported.

2. The encouragement of the United Automobile Workers to include, in the requested benefits from bargaining, increased psychiatric insurance for hospitals, for doctor's office visits, out-patient clinics, day hospitals and the like. Dr. Blain established contacts with Melvin Glasser, Ph.D., former executive director of the White House Conference on Children in 1950, more recently Vice President of Brandeis University, and now head of the Social Security Department of the United Automobile Workers. Dr. Blain participated in meetings with one of the top automobile companies of the country, the U.A.W., the National Blue Cross, and leaders in Michigan. This increased psychiatric coverage in insurance should form a model throughout the land and help relieve one of the blockages in psychiatric therapy and prevention.

3. Social Security legislation since 1936 has always excluded mental patients, or nearly all, from the benefits of the various bills. It appears now that the Ways and Means Committee of the House will favor a bill in which this exclusion has been taken out. It looks as if this bill is going to go through and that hospitals primarily for mental patients, such as private mental hospitals, private nursing homes and others will be able to take care of people over 65 with mental disorders, and that the psychological insult to our patients of always excluding them appears to have been finally overcome. Whether or not this happens in this particular bill, the movement is gathering momentum because of Dr. Blain's leadership, and it appears certain that it will come.

Dr. Blain's collaboration with Robert Robinson in public relations and public education in psychiatry throughout the country, his collaboration with a social scientist in connection with the Automobile Workers health insurance, his work with government officials in connection with the mental aspect of the health of patients over 65 years of age—all these are indications of his tremendous alertness and breadth of interest and know-how in effecting most important changes for the mental health of our citizens.

But before these most recent contributions, there were others made by Dr. Blain which have been outstanding.

He carried the crusading spirit derived from his missionary father into psychiatry. The first opportunity was in World War II when he was made head of the Merchant Marine program in psychiatry. Here he set up something patterned on Dr. Austin Riggs' treatment methods which he had learned in Stockbridge, Massachusetts. It was a high-pressure program, with a great deal of social build-up for boys disturbed emotionally, who came in from the ocean after shipwreck or torpedoing. The program was oriented to getting them back to sea. He received great assistance from volunteer helpers in residential centers or rest homes. He used part-time civilian physicians. He struck out and forged new directions in psychiatry. This was pioneer work. Many of his programs were far ahead of the times and clearly represented new steps in psychiatry. It was social psychiatry; it was social therapy; it was milieu therapy; it was the open door; it was the use of part-time civilian physicians in public psychiatry.

After four years of this, Dr. Blain was one of two officers who obtained the rank of Captain in the U.S. Public Health Service and was the first psychiatrist certified by examination in the Public Health Service.

After accomplishing the remarkable Merchant Marine program in the U.S. Public Health Service in World War II, Dr. Blain moved into the Veterans Administration as Chief of the Division of

Psychiatry and Neurology. There he developed a forward-looking program under the leadership of Generals Paul Hawley and Omar Bradley. Every possible encouragement was given to help the veterans, and Senator Warren Magnuson, with his committee for training, helped to promote an extremely rapid expansion of service. Forty-nine new mental hygiene clinics were established in two years with 100,000 patients going through them. The mental hospitals themselves were improved in architecture, and their staffing and budgets became models. Plans were developed for new psychiatric units in general hospitals. In the construction of new mental hospitals, they were guided by the best thinking to obviate built-in obstacles to overcrowding. Perhaps the greatest contribution was made to the training programs. These were sponsored by medical schools and committees of medical school deans all over the United States. Dr. Blain was involved in the organization of the Menninger Program and appointed Dr. Karl Menninger as administrator and head of the Winter Veterans Hospital. Approximately 2,500 physicians participated in the V.A. Psychiatric Training Programs. Two years ago 15% of all practicing psychiatrists were graduates of the V.A. training programs. This brought a new kind of psychiatry into public hospitals. A new status came to mental medicine. It was seen that even the "best could bust" when strain, duty and fatigue were intense enough and prolonged enough. The Winter Hospital, at Topeka, helped the Menningers develop one of the finest psychiatric centers in the world. In psychology, a clinical training program was organized which produced over 2,500 trained clinical psychologists which contributed to the expansion and importance of psychology in the treatment of the mentally ill.

After two and a half years at the Veterans Administration, Dr. Blain became the first Medical Director of the American Psychiatric Association. He remained here for ten years. This was a period of rapid development in psychiatry. Dr. Blain was tremendously important in the expansion of many fields of activity of the Association. The latter became a coherent whole with drives toward accomplishment spearheaded in many instances by Dr. Blain, who gave unstintingly of his experience and help to the various presidents elected for one year terms during his directorship. Communication among all psychiatrists brought them closer together and developed a new feeling, new energy and new devotions to their professional lives. This was greatly facilitated by the experience and knowledge of Robert Robinson. He flew over the country with Dr. Blain far and wide, literally in planes and also through communications, which made the officers and membership of the A.P.A. fairly tingle in their urgency for accomplishment, whether through national committees or in local endeavors in their home societies and practices.

Finally, Dr. Blain felt that, with the coming of new, younger presidents, it was wise for him to move to other areas of work. He selected the State of California and became Director of the Department of Mental Hygiene at Sacramento. Here there was a new type of public, constantly on the move, restless, easily influenced by good or bad ideas. He did a grand job in education of the general public, the Medical Association, the psychiatric groups, the state legislature to some degree, and the administration of Governor Pat Brown. He promulgated the idea that psychiatry was now ready to be activated in the same terms as general medicine. People needed to be treated in their own communities. The State service could be changed to conform to this new idea. The decrease in hospitalization in terms of beds for the mentally ill exceeded any other state in the Union. The population was approximately the same as that of New York, yet

the number of beds operated by California was 40% of that operated by the State of New York. The budgets therefore were radically different. His effort was to decrease the burden of the State for hospital beds and increase out-patient and private hospital facilities and private insurance. This was a significant endeavor when so much of medicine was turning to the government for increased support with increased taxation.

From an internship in pathology and medicine at one of the best private hospitals in the world, the Peter Bent Brigham at Boston, an integral part of the Harvard Medical School; from a residency at the Boston City Hospital under Stanley Cobb and Abraham Myerson; from experience with private patients at the Austin Riggs Center in Stockbridge and at Dr. William A. Terhune's Silver Hill at New Canaan, Dr. Blain moved into public psychiatry.

He has developed certain principles of organization and endeavor, which he has written about and spoken about from one end of the country to the other and from one continent to another.

These principles and proposals for developments and operation in psychiatry in the recent part of the century might be called the *New Look*. They are the following:

Less hospitalization.

Adequate treatment available as early as possible.

Avoidance of geographic and psychological dislocation.

Continuity of treatment, not of residence.

Classification of patient from the point of view of supervision, liaison and social needs, allowing use of more private agencies, homes and the like.

More use of social forces.

Suitable milieu, therapeutic community, open door.

Improved services for indigent and unfortunate.

More dependence on voluntary and non-governmental sections of society.

Payment from personal insurance, labor benefits, public funds; multiple funding.

Acceptance by the entire medical profession of responsibility for mental conditions.

Use of a variety of resources in local communities.

Greater use of non-medical personnel.

Use of general and non-medical facilities.

Use of private and semi-private patients for teaching and research.

Closer association with public health officers and nurses.

Programs emphasizing services alert to clinical and operational research.

Professional training for all mental health personnel.

More training for less trained personnel.

More attention to special categories, such as alcoholics, small children, the aged, adolescents, delinquents, drug addicted.

Services of various kinds on a single campus.

Greater use of non-medical personnel, such as teachers, ministers, lawyers, marriage counselors, family agencies.

Study of recruitment problems in order to increase personnel and to make better use of personnel presently available.

In planning a mental health program, Dr. Blain has believed that the basic goal is the development, maintenance and restoration of social and personal equilibrium, despite emotional stress, with the principal aim of assisting people to a reasonable operating level. Complete cure may not be possible in given circumstances. Psychiatric services should be within the living radius of the patient. When possible, needs should be met by general health, welfare, education or recreational facilities of the community

rather than through specialized psychiatric services.

What went into the making of Daniel Blain, this unusually effective person of diverse activities and abilities, almost da Vincian in the variety of problems he has tackled? What were the polarizing forces or varied quanta that directed his development? Ancestry: superior, respected, hard-working, with obvious ability. Background: unorthodox. He was raised at home in China until 11 years of age, later sent to the South in the United States, then to New England, the Midwest, Chicago, Washington, California, Pennsylvania. Education: varied, unorthodox. His mother taught him until he was 11 years of age. He never went to a public school. He worked his way through much of his education, both college and medical. Persons of influence: unusual number of superior men of excellence. Teaching English and history interrupted his education in the United States. He spent two years in colleges of physical education; he studied anatomy twice before he got into medical school.

The family tradition was varied; there was religious, educational, medical and missionary activity among his forebears. His paternal grandfather was a minister in the South, his maternal grandfather became a doctor after he had been a Captain in the Civil War on the Southern side. His educators, besides his mother, were Canby Robinson at Tulane; Harvey Cushing, Sam Levine, James O'Hare, Sandy McPherson at the Brigham; Stanley Cobb and Abraham Myerson at the Boston City Hospital, Austin Riggs and Silver Hill in Connecticut. His opportunities appeared to be too many to be called mere chance. Selective seeking out, from Canby Robinson to Cushing, from Levine and O'Hare to McPherson, from Cobb and Myerson to Riggs. There were Generals Hawley and Bradley, the leaders of the A.P.A.—the Menningers, Gerty, Tompkins, Braceland —and the great opportunities in California under Governor Brown.

His racial stock was almost entirely Scottish, with some English. His grandfather Blain was a Presbyterian minister, a gentle person who had a rural parish near Charlottsville, Virginia. His grandfather Grier, on his mother's side, was a doctor. He had been in the Civil War as a Captain, was graduated from Jefferson Medical School, lived to be 92, practiced in Cabarrus County, North Carolina; his patients would not let him retire at 85, but kept on seeing him until he was 89 or 90.

His grandfather Blain had been in the Civil War. He was wounded and they were going to amputate his arm. But just before the operation word came from General Lee to move. The amputation was not performed, and he had his arm the rest of his life. He lived in Virginia, in Covesville near Charlottsville. There was a ruggedness and determination in his forebears.

He went to Washington and Lee University, where he joined a fraternity which had been established by his grandfather Blain and his younger brother, later Judge Randolph Blain, of Louisville, in 1856 at Washington and Lee. Dr. Blain knew both his grandparents quite well. All of them had much influence on him. They were highly respected; they were all college graduates for six generations—either teachers or preachers—and they all went to Washington and Lee. Dr. Blain's son was the sixth Blain there without a break.

His grandfather was a doctor, respected in his community. After a row with the local Democratic politicians in North Carolina, he became a Republican where everybody else was a Democrat.

His grandmother in North Carolina was a first cousin of Dr. Barringer, the first president of the University of Virginia, who had been dean of the medical school. Later his grandmother's cousin was appointed president. His grandmother Blain

belonged to the Mercer family. She was a great grandaughter of General Hugh Mercer, who was Surgeon General to the Army in Washington's time. He started out as an apothecary and was so highly respected by George Washington that he was made a General in the line and led the troops in the Battle of Princeton, where he was killed. He was buried in Philadelphia. The Mercers went back to Pocohontas, who married John Rolfe, so thirteen generations back Pocohontas was Dr. Blain's Indian ancestor.

Families were always poor, economically, "poor in economic matters," Dr. Blain says. They were plain citizens, but people who had great respect in their community. He had a family inheritance of tremendous intellectual capacity, leadership and respect. He believes that he received from his grandfathers the great influence of intellectual ambition, and he feels they were a source of strength in his background. His grandmothers were too; they were leading people. His parents came from large families. His mother was the oldest of eight; his father was the oldest of six. There were many relatives. He looked like his mother, who was the teacher who went to China, but he has always been closer to his father's side of the family. His father was a Presbyterian minister who went first to Japan and then to China. He believes it was helpful for him not to have had much money because he had to earn everything that came his way in prep schools, college and medical school, except for some small contributions from his father who was also able to borrow. He lived in China until he was 13; he was a complete stranger to American culture when he came here. He used English terminology, but he was different from other boys; thus, he had to prove himself.

China had great influence on him and gave him a great respect for older people, for scholarship, and for the printed word. Books have been a hobby all his life. He has always liked to read; history has always been of tremendous importance. He grew up looking across at a field where there were graves that had been there since the time of Abraham. He was therefore not overly impressed with brand new civilization or culture. He came from the oldest culture in China and the oldest culture in this country, Jamestown, so that he always had a great deal of feeling for the past. This, he said, has made him highly sympathetic to the atmosphere of the Pennsylvania Hospital and the beginnings of medicine, the Pennsylvania Hospital where he has been made Director of Planning and Development of Psychiatric Activities since he returned from California in April, 1963.

It was Dr. Sandy McPherson, a psychiatrist in Boston at the Brigham Hospital, who interested him in psychiatry when he made his rounds on the medical service at Brigham. Here was a different kind of man. When he talked to patients during ward rounds, he listened to information which no one else would have thought of eliciting. He invariably got a new slant on what was wrong with the patient; he always left the patient more contented than he had been before the interview. This was not true of most of the other doctors. McPherson exercised a tremendous influence on Dr. Blain and on all the other residents to the extent that many of them went into psychiatry from the Brigham.

As has been said, he never went to school until he was 11 years old, having been tutored by his mother. (One recalls here the similar experience of Freud.) He went to the 7th grade in a boarding school in Shanghai. He was unhappy about this and resented it to some degree; he became homesick, felt that he had been somewhat rejected, but he does not think this left any serious scars. He stood well in his class, being at the top the first year. There was quite a religious atmosphere there.

He had been brought up in a religious environment. He was an active religious worker until he was some 20 years of age. He had been a leader in the Presbyterian church as a Sunday school teacher and in the Young People's Christian Group. Since perhaps 28 years of age he has been busy, and most of his Sundays have been taken up with other activities. He has not been an ardent church-goer, but he has maintained his connections, and feels that religion has been an extremely important matter all his life. Since he was 13 years of age he has never spent any length of time with his family.

There were two deaths in his family. His younger sister died at 5 years of age. She was one and one half years younger than he, and died of meningitis in the interior of China in 1905. Not having seen his father for a number of years, he had rather a profound experience when his father died at 64 in China and was buried out there. It was very hard for him to accept the fact of his father's death.

Determination and strength of will was shown by Dr. Blain before he studied psychiatry. When he was in Boston he found that he had a profound allergy to seafood. He had never lived on the coast in his life. He could not eat lobster or shrimp. He became violently ill whenever he ate it. He remembered that his father said that he had some sort of allergy to seafood. He could not eat all these things and no one in the family was able to eat them very much. This went on for four or five years in Massachusetts. Then he moved to New Canaan and was a bachelor and was invited out to dinners considerably. He mixed with successful community groups, at country clubs and in homes. He thought about this and decided that his difficulty in eating seafood was unnecessary and was perhaps a hangover from his father. He made up his mind he would eat seafood; he did and became sick, with a cold sweat on his brow. He felt he was poisoning himself, but he determined to eat seafood, and he persisted and after a number of times did not get sick and now he finds it a favorite food. This is an example of the courage, will power and determination which he has shown throughout his professional life.

Dr. Blain's mother met his father on the way to the Orient as missionaries. She went to China; he went to Japan. She went over and married his father in Japan. This was in 1897. The day they were married Admiral Dewey, with his flagship Olympia, which is now here in Philadelphia, was in Yokohama Harbor. Hearing of the young American couple being married, they were invited to come out and have tea with Admiral Dewey, which they did. The battleship Olympia thus has a special interest for Dr. Blain since it is in Philadelphia Harbor now. It was Admiral Dewey's flagship in the Spanish-American War.

Dr. Blain's wife, the former Logan Starr, has been particularly tolerant of his travels and is very devoted and supporting of his career. He reports that she has had "a great deal of influence on me." She has fitted in with his professional obligations because of her social attitudes, her interest in people and her willingness to entertain at the drop of a hat. One feels that Dr. Blain's professional devotion and travels must have been and continue to be a strain on a most adaptable and attractive spouse. They are now in their 29th year of marriage. They have one son who has been graduated from Washington and Lee University.

Dr. Blain got high honors in many subjects. He also had athletic ability, although he was small, playing in preparatory school and college football.

After his second year in college, he taught English in the Hang Chow Christian College for one year, then went back and finished college. Then he taught for two years in preparatory school after

finishing college. He thought he would go into education. He went to Chicago to study, but stayed only several months. He then studied physical education for two years, both in Chicago and Nashville, and had two courses in anatomy and dissection. He thinks his broad education and experience have been of considerable value to him in his later years. There is an interesting story about his entry into Vanderbilt Medical School. He had already done anatomy and had a good record in college. There was a second foreign language requirement, however. He was asked whether he had Spanish or German or anything at all. He finally said that he could speak Chinese. So he was given language credits in Chinese to enter medical school. He thinks he is the only man who ever got into a medical school offering Chinese as a foreign language. Dr. Canby Robinson was at the Vanderbilt Medical School and had interned at the Pennsylvania Hospital.

When asked whether he had had any great frustrations in his life, with all these changes and transmigrations, with loneliness and rejection and having to work his way through much of his educational development, he said, "No," that he felt he had been awfully lucky. He said he soon learned that he wasn't the brightest person in the world, although he had an adequate I.Q. He developed the conviction that if he worked twice as hard as anyone else he could keep up. He felt that if he pushed himself to the limit he got the best out of all his abilities. This is why he goes twice the pace of many people. His psychoanalysis brought out the importance of some of these factors. He said he was helped physiologically, because he had a low metabolism, a slow heart and low blood pressure. He felt he could go fairly fast without physiological damage.

As to future developments and important directions in present-day psychiatry, some of them have been indicated in previous sections. Very briefly, Dr. Blain believes in a closer integration with medicine; he believes that treatment should be given at the same general places where people are being treated medically, with general practitioners treating more emotionally disturbed conditions because general medicine is absorbing more psychiatric knowledge. He believes we have to learn more from social science and anthropology; experimental psychology is very important for us. He believes that bringing together the two divergent schools of biological psychiatry and dynamic psychiatry is important. He believes that the study of brain function is very important, particularly the phenomena of the effects of isolation, noise and monotony, especially for industry. With regard to religion, he believes there is a possibility of new cooperation between religion and psychiatry. He believes that the 350,000 ministers could be brought into the generalized program of the social mission of the church, along with the spiritual mission. He believes that the one hundred million church people can make some impact on the mental health needs of the nation. People's psychological needs are related fairly closely to their spiritual needs. Dr. Blain for several years taught at the Catholic University of America on the development of personality. He believes all human beings are born with the need for a relationship with a superior being. This relationship is the spiritual need of man. As to international relations, he believes things are going on in various countries all over the world which are quite similar and that we should try to find the roots of these strivings, which lead to fears and hostilities. If we understand them better we will have more chance of overcoming some of the things which keep people from getting together, keep them separated and produce more and more wars.

As to delinquents and psychopaths, he

thinks a fair number can be classified as mental disorders. He thinks they can be defined as having a mental illness. He believes that anti-social behavior is a method of communication of the juvenile delinquent and that, if we are able to deal with it on that basis, meet him with a partial solution of his needs, treat him as having some validity in terms of his own point of view and with some meaning behind his activity, we might evolve a different concept of what delinquency actually is. Dr. Blain is on the steering committee of a new group called the Joint Commission on Correctional Manpower Shortages. He thinks people are operating from social pressures which they do not understand. He does not think we should abolish certain social restrictions in society, but that society has to be protected. On the other hand, he believes that the kindly approach, which is not practiced often by sadistic and selfish people, would accomplish a great deal. He believes that social conditions are responsible for the increased rate of crime and delinquency. He points out that there are far more adolescents and young adults than there were before and that by 1970 45% of the population will be persons who are 24 years of age and younger. Many of these will be in school, non-productive; those who are not in school will have enormous problems in finding any kind of job. There will be many opportunities, therefore, for them to get into trouble and to cause enormous social disturbances.

It was 104 years between the founding of the A.P.A. and the year 1948 when Daniel Blain became Medical Director. He got the Association off the ground. We take for granted now that the A.P.A. is a vital instrument in our professional life and we hope the national life. The patterns of operation now can trace their roots to what was done by Dan Blain during his Directorship in 1948–1958.

Robert Robinson gives an account of Dr. Blain's principles of leadership. He believes that every leader should overcommit himself, virtually always say "yes" to any reasonable request for service. This means that he must sacrifice refinements in the interest of more massive accomplishments. Keep things moving on all fronts, from every conceivable angle. By overcommitting yourself, you will wind up getting 90% of the job done which you set out to do and that will be a lot more than you could get done by playing it safe. He is really a great administrator, for the simple reason that he has the capacity to get intelligent and productive people to love him, to work incredibly hard for him, and to produce all manner of good works under his aegis. Progress comes through constant movement, he reasons. Act on many fronts. Play every possible angle. Utilize every conceivable resource. Activity is good. Travel is good. Committees are good. Talk is good. Hard work is good. Hard play is good. Sitting around doing nothing is suspect. Contemplation is often of dubious value; quick thinking qualified by quick action is better. Don't worry about the details. Do it now. Natural change is not a neat, orderly process anyway. Things will come out okay if you take the leadership. People will follow and work out the details.

Working closely with him over any period of time gives one the feeling of having survived a tornado. His staff works incredibly hard for him. They want to protect him, to see his ideas materialize.

The first thing he set his mind to when he became Medical Director was to establish some communications within the profession and specifically the *Newsletter* and the *Mail Pouch*. When we brought up the idea of the *Mail Pouch* the officers didn't really know what we were talking about. There was no budget for it. So Dan wrote out a personal check for $500 to pay the postage on the first couple of issues. He

later was reimbursed because the *Pouch* soon began to pay for itself. This is an illustration of his faith in attempting something new.

He is not a man who wants to follow through on details. He is the great stimulator. He has terrific imagination and more ideas in a day's time than you can shake a stick at. Once an idea begins to materialize he wants to turn the administration over to others and go on to other things.

Daniel Blain is an aristocrat and so is his wife. He thinks like one and acts like one and so does his wife. There is a sense of *noblesse oblige* in all that he does, a feeling of security about his social status, a feeling that a privileged status of birth entails a certain obligation to humanity, a carelessness about how he looks and dresses that so often characterizes the aristocrat, and an attitude towards money that views its possession as a responsibility rather than a personal privilege.

He loves a good time. He is a party man, a good fellow.

Some people think of him as an incurable optimist to the point of naivete. This is quite wrong. He is thoroughly in touch with reality at all times. His expectations are always realistic. He expects no millenium, but he does count always on taking a few steps forward.

He has great faith in every man's potential for good, for improving his lot. I can never recall having heard him say anything unkind about another person, or another profession, or another agency. (This reminds the writer about the great American humorist and entertainer Will Rogers.) Always constructive. Always searching for common ground in the interest of moving ahead cooperatively. Always willing to settle for partial agreement. Never asks for the whole.

He almost defies any neat summing up. He does not burden others with his own problems. He is glad enough to share other people's burdens.

He is a tremendously kind man. Robert L. Robinson, who has given a large share of his impressions of him, says he has known him to spend any amount of time with a staff employee who ran into psychiatric difficulty.

Thus, Dan Blain is a man of energy, vision, courage, conviction, dedication to the relief and prevention of suffering of patients and the building of a constructive world society. Samuel McCord Crothers wrote a book of essays called *The Three Lords of Destiny*. They were courage, skill and love. The subject of this sketch has them in abundance. Dan Blain has had his share of physical illness. He was quite surprised to suddenly realize, several years ago, that he had been seriously ill for a long time, but most of the time did not think about it. Up to 52 he had never had a general anesthetic nor major surgery. After five years of symptomatology he was confronted with a hiatal hernia, and after a number of investigations he was operated on to cut the band of tissue that enclosed the lower end of his esophagus. He had difficulty in swallowing or taking solid foods for as much as six months. The operation was unsuccessful. There had been an anomaly of muscles. He continued working. Nine months later, having lived on milkshakes and eggs, a second operation was performed. He lived a somewhat limited life in terms of eating, but gradually forgot a great deal about it. Five years later he had a generalized esophageal inflammation. He had a gall bladder operation and was found to have very high cholesterol and went on a radical anti-cholesterol regime. He made an uneventful and rapid recovery from his operations. Since 1963, he has been living with a fair amount of medication and has not slept on a flat bed for three years, being continually propped up, all of which does not seem to have interfered with his activities. He learned to sleep sitting up, so now he can fly all night in a plane and can sleep as well on a plane

as he can in bed. He feels now, in his 66th year, that he is probably doing more and better intellectual work than the ever did in his life. He looks at himself, he says, rather curiously from time to time and says, "Isn't it funny? I have really been chronically ill for a long time now, some ten years or more, and yet it does not seem to interfere or have any particular effect on my activities." Daniel Blain has had good mental health with regard to his physical disabilities.

Robinson has indicated his tremendous activity and energy and his travels. These must have been difficult many times for his wife, but there is so much rightness and achievement in his nature and history that it is not important to consider the shadows. We have seen that he must have good mental health with regard to his physical illnesses. He certainly has been impatient of comfort, procrastination, complacency, or easy compromise. He is for up and doing, effort, trial and experiment. This reminds me of Goethe, who said somewhere, "Trying and effort generate resources." Robinson thinks that sometimes Dan Blain thinks too fast to express himself clearly. I have not experienced this. But, it is not his diction that has made him the great man he is, but rather the ideas and sincerity which shine through his words. One knows somehow that what he is trying to say is good and one is inclined to say, "I agree. I don't know exactly what it is he is proposing, but if he wants it, it is okay by me and I'll support him."

When we are speaking of Dan Blain we are speaking of eminence. The Goertzels in their book *Cradles of Eminence* quote C. P. Snow from *The New Statesman* of March 26, 1960 as follows: "Einstein continued to work hard at his physics until the end. The curious thing was, he worked in complete disagreement with almost all of his contemporaries."

Practically the opposite can be said of Dan Blain. Notwithstanding his energy, his rash of ideas, his impatience, there was in great measure consensus with his contemporaries. They supported him and respected him as he did them.

If I think of storytelling, mythology and history, I think of Dan Blain as a composite of Apollo, Pegasus and St. Paul. Apollo was the Healer and the father of Aesculapius. He was also the God of Life and the God of Truth. Edith Hamilton says that,

> "From your dwelling place at the heart of the world, you speak to men."

As for Pegasus, he had the wings that carried him to the end of the world. He helped Bellerophon slay the monster vomiting flames, with lion's head, goat's body and dragon's tail. As to St. Paul, he was the great missionary who turned the course of history. The Western world is very different because of his life and conversion. Henry Thomas and Dana Lee Thomas (1) write, "God, declared Paul, is the single God of the Jewish prophets, the Father of the human race. 'To us there is one God, the Father, of whom are all things, and through whom are all things.' Sixteen hundred years after the declaration of this Pauline creed, we find the same conception of the Godhead expressed in the philosophy of Spinoza. 'I hold,' writes this Jewish pantheist, 'that God is the immanent . . . cause of all things. I say, All is God; all moves and lives in God. And this I maintain with the Apostle Paul'. . . . 'All men are brothers in the fatherhood of God.' Paul was one of the first democrats in the history of the world. He believed in the spiritual democracy of fraternal good will. All humanity is one family—nay, one organic unit of life. 'For just as there are many parts united in our human bodies . . . so we form one body through union with the Lord, and we are individually parts of one another.' Therefore, urged Paul, 'serve the Lord' by serving your fellows . . . 'be unfailing in hospitality . . . live in harmony with one another . . . and peaceably with all man-

kind.' In this injunction to the peaceful relationship of the human family, Saint Paul included not only the Christians but all men—Jews and Gentiles alike . . . 'For (in the eyes of the Lord) there is no distinction between Jew and Gentile . . . he is the same Lord of all . . .' "

To comprehend Daniel Blain within the limits of a sketch is like trying to square a circle. The areas and arcs become so multiple, each one demands a story in itself. The same applies to his biography. His writings, like his travels, are global in scope. The more one studies him, the greater is one's astonishment. It is a humbling experience to talk of life, perspectives, molding influences, goals, ambitions, achievements, with such a person. There should be a library of interviews or tapes of the leaders in our profession, and I am privileged to present a tape I have from Daniel Blain on these matters to the archives of the Association.

Then to hear the tribute of Robert Robinson, almost his alter-ego at times, who has worked with him for a decade, is inspiring.

One is reminded of Cardinal Newman's definition of a gentleman: "He is never mean or little in his disputes, never takes unfair advantage, never mistakes personalities or sharp sayings for arguments, or insinuates evil which he dare not say out. From a long-sighted prudence, he observes the maxim of the ancient sage, that we should ever conduct ourselves toward our enemy as if he would one day be our friend. He has too much good sense to be affronted at insults, he is too well employed to remember injuries, and too indolent to bear malice. . . . He may be right or wrong in his opinion, but he is too clear-headed to be unjust; he is as simple as he is forceable, and is as brief as he is decisive. . . . Not that he may not hold a religion too, in his own way, even when he is not a Christian. In that case his religion is one of imagination and sentiment; it is the embodiment of those ideas of the sublime, majestic, and beautiful, without which there can be no large philosophy. Sometimes he acknowledges the being of God; sometimes he invests an unknown principle or quality with the attributes of perfection. And this deduction of his reason, or creation of his fancy, he makes the occasion of such excellent thoughts, and the starting point of so varied and systematic a teaching, that he even seems like a disciple of Christianity itself."

Whether it is the Bonds, the Streckers, the Menningers, the Gertys, the Bracelands, the Felixes, and many others of such stature, one realizes one belongs to a noble lineage with a great and worthwhile heritage. This not only carries us along but prods us to take new and exploring steps for the benefit of mankind, as I believe the Aesculapian oath states it.

Widening and new horizons are inspiring and energizing. One finds this in history, science, literature and the biographies of persons. This I have found in exploring and recording the life and philosophy of a recent President of the American Psychiatric Association. This is something to be proud of. This is a man to be proud of. Human and spiritual perspectives, energy, wisdom and effectiveness. He is out for the maximum mental health potential of all people. He reports (2) that "the wide field of general welfare, the operation of trouble-shooting agencies, the caretakers of the world, and those to whom people go when they are troubled and heavy-laden can become a force far more important than the inadequate treatment services that a few highly trained specialists in mental health can bring to the people." . . . "So now we pay a great deal of attention to the kind of person who works with people in trouble, with special emphasis on the ability to be kind, to give of oneself, and to move out toward people; in short, we search for those who

like people." In one of Daniel Blain's papers, he quotes Arthur Little. Daniel Blain says that the psychiatrist of the future is a humanitarian, a scientist and a member of the Fifth Estate, defined by Arthur Little as those with capacity to wonder, ability to question, power to generalize, and the aptitude and strength to apply. Important also is a healthy skepticism and an immunity to neo-phobia.

In closing, may I quote from the last paragraph of Daniel Blain's paper on Organized Religion and Mental Health: "Much of what I ask is extra-curricular, so I beg you to recall the words of a well-known character in Dickens' *A Christmas Carol.* 'But you were always a good man of business, Jacob,' faltered Scrooge. 'Business,' replied the ghost, wringing his hand. 'Mankind was my business—charity, mercy, forbearance, and benevolence were all my business. The dealings of my trade were but a drop of water in the comprehensive ocean of my business.' "

It seems appropriate to close this biographical sketch with the citation to Dr. Blain from the Association on the occasion of his leaving the Directorship.

The American Psychiatric Association pays this tribute to Daniel Blain, M.D. for exceptional service rendered as its first Medical Director from February nineteen hundred and forty-eight to September nineteen hundred and fifty-eight. His unselfish and wholehearted attention to his task and his creative ability are forever eulogized by the priceless products of his work which all who will may see. To recount his accomplishments is to chronicle the advances of psychiatry over a decade, for he initiated many of them, furthered others, and shared in all of them. His breadth of vision and tireless devotion to duty have endeared this respected Fellow of the Association to all who have worked with him. It is truly said that he gave of himself without stint or reservation for the benefit of the Association and the mentally ill. With boundless gratitude, the members of the Association join as one in wishing him Godspeed as he relinquishes his position as Medical Director and turns to other tasks in the Association's behalf. Done on the occasion of the 114th Annual Meeting of the Association in San Francisco, California, in the month of May nineteen hundred and fifty-eight.

Harry Solomon, M.D., President
William Malamud, M.D., Secretary

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Memoir of Earl Danford Bond (1878–1968)[1]

By KENNETH E. APPEL, M.D.[2]

EARL DANFORD BOND, M.D. died at his home in Bryn Mawr on October 21, 1968, in his 89th year. His wife, Grace Newson Bond, had died in January, 1967.

Quiet. Gentle. Courteous. Restrained. Patient. Firm.

Several quotations come to mind in thinking of marked characteristics of Dr. Bond. Leigh Hunt (1) wrote, "Patience and Gentleness is power." Certainly the above traits gave Dr. Bond a sense of strength to all who met him. And Emerson (1) wrote, "Adopt the pace of nature: her secret is patience." Also, Shakespeare (1) wrote, "How poor are they that have not patience! What wound did ever heal but by degrees?"

On first impression one might have thought that Dr. Bond was quite passive. But behind this impression there was something very positive. There was not great assertiveness; there was great brevity in his remarks, comments or speeches. He used to insist that his residents could put all they had to say about a patient that was significant in two typewritten pages. He was for brevity, clarity and sharpness of expression. His insights cut through much detail, wordiness, speculation and complexity of theory. He was firm, solid, persistent and determined.

He was perceptive, tolerant and understanding. There was acceptance in the best sense of the word and appreciation. Weatherhead (2) wrote of appreciation: "Our feelings of joy and appreciation should be far more readily expressed, especially when we have recognized to what an extent our fellows need appreciation. To praise another costs so little. It does, for that other, so much. . . ." And Howe and LeMesurier (3) wrote, "Acceptance with regard to the Universe—accepting the whole of reality—evil as well as good, sickness as well as health, death as well as life. We must accept people as they are, those whom we hate. We cannot directly change them but we can get together with them, try to understand them, wait and pray. If there is evil—love not hate is the only thing that can change it. We must also accept ourselves. Acceptance means not approval or acquiescence in wrong doing but belief that change to make things better can come only gradually by conviction not by force —by patience, tolerance and humility. Evil is real and not to be denied or belittled but accepted and conquered not by extermination but by absorption." The spirit of these quotations has often made me think of Dr. Bond. His understanding of human nature was of the highest order. He could respond to its heights with admiration and to its depths with a kind of sympathetic, perhaps regretful, understanding, but without bitterness and hostility. I never heard him cut a person down, denigrate or belittle someone, even someone with whom he might sharply disagree or disapprove. All this seemed to open possibilities for some possible worthwhile development whether in a patient with difficult or destructive behavior or in some theory which seemed new, startling and questionable.

[1] Section on Medical History, The College of Physicians of Philadelphia, 5 May 1970. Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

[2] Professor Emeritus, Department of Psychiatry, The School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; Consultant, Medical Staff, The Institute of the Pennsylvania Hospital, 111 North 49th Street, Philadelphia, Pennsylvania 19139.

The above qualities were highly helpful and contained marked healing capabilities. He was a therapist, brief, deep, effective to many people. His abilities operated almost unconsciously. An Italian proverb runs, "From listening comes wisdom, and from speaking repentance." His remarks reflected great light from his depths of experience. His gentle and brief words of wisdom and light helped many a person through darknesses and troubled waters.

Dr. Bond was friendly, kindly and loving in the broadest meaning of the word. He was a gentleman, a humanitarian and scientist. He was a clinician, a researcher and a professor. However, there was nothing professorial about him. He was the opposite of pompous, as we have said. He had a wholesome amount of aggressiveness; but he was not urgent or aggressive socially, personally or professionally. He had a keen sense of humor, he was unusually well-liked and respected. He was an effective administrator in the Army in World War II, at the Pennsylvania Hospital's Department of Nervous and Mental Diseases and later at The Institute of the Pennsylvania Hospital. These qualities led him to become the 58th President of the American Psychiatric Association in 1929.

Dr. Bond was a leader amongst his colleagues nationally and in his community of Philadelphia. In recognition of his leadership in community affairs, he was given the Bok Award, the highest honor in Philadelphia, in 1932. He was eminently respected, as we have said, by his colleagues, by the community and by his students. Out of his manifold experiences, his depth of perception and his clarity of communication, he became consultant to many colleges, universities and foundations. Whether it was the Commonwealth Fund or the Rockefeller Foundation, he was consulted on many projects, and his recommendations helped fund the psychiatric education of many young men who later became distinguished leaders in American Psychiatry. I can still see Alan Gregg, one of the most distinguished medical educators this country has seen, walking with his vigorous step and swinging arms, keenly anticipating a conference with Dr. Bond, then coming away from Dr. Bond keen of eye and almost flushed with excitement, brimful of new ideas, affirmations, dedications and plans for new endeavors. He would stop to talk for a few moments with some of us younger men, giving a bit of encouragement or asking an invigorating question that would help us in our endeavors for many a month. These were creative, inspiring experiences for young doctors.

Dr. Bond was either the founder of many *firsts* or their potent ferment. He was one of the earliest who sought a close relationship between psychiatry and the rest of medicine. He strongly supported the contributions of disciplines outside the usual areas of medicine and psychiatry, namely psychology, social work and education. In 1924, he established one of the earliest residential and research units at the Pennsylvania Hospital for the study and treatment of behavior disorders in children following encephalitis. He generously shared authorship with me in his book on this research. The building of The Institute of the Pennsylvania Hospital in 1930 was a totally new venture in psychiatry. It was an institute for the treatment and study of patients with neuroses, personality disorders, psychosomatic conditions, with university and medical school affiliations. It was the first such hospital not devoted to the traditional types and diagnoses of mental illness. This was the first really open psychiatric hospital perhaps in the world. He was probably the first to support a classical Freudian analyst on a hospital staff. Under the Commonwealth Fund, he furnished three year fellowships at the Pennsylvania Hospital. When he was made

Professor and Chairman of the Department of Psychiatry at the University of Pennsylvania in 1930, he organized fellowships providing training at the Philadelphia Child Guidance Clinic under Dr. Frederick Allen and under his own staff at the Pennsylvania Hospital in West Philadelphia. They were among the first organized training courses in neuropsychiatry in the country. He was a consultant in 1938 for the study at Harvard University of young men doing well in meeting life's problems and academic work. This was one of the first psychiatric studies on normal man. He established the research on student council members at Haverford, Swarthmore and Bryn Mawr Colleges in 1947. The life courses of these young people were followed later in their careers. He was made a member of the Board of Trustees of the Grant Foundation in 1948. He had urged the Fund to set up training centers for marriage counseling under medical supervision. With a generous five-year grant, the Marriage Council of Philadelphia became associated with the Medical School of the University of Pennsylvania and later taught medical students in the Division of Family Study, an integral part of the Department of Psychiatry.

Dr. Bond had many honors: the Presidency of the American Psychiatric Association in 1929, the Bok Award in 1932, the Distinguished Service Award of the Thomas W. Salmon Committee of the New York Academy of Medicine in 1963.

Dr. Bond was born in Minnesota. He came from a background of teachers, both his mother and father being in that profession. A famous teacher in high school in St. Paul taught both Walter Cannon and Earl Bond and influenced them both to go to Harvard. This same lady, Mary Newson, influenced a group of young ladies to go to Radcliffe in Cambridge. One of them, Grace Newson, lived in the home of the famous essayist and preacher, Samuel McCord Crothers. Grace Newson later became the wife of Dr. Bond. Her warmth, jolly-*heit,* and spontaneity, made the couple of Grace and Earl Bond delightful persons to be with socially. The world seemed a better place for having known them or having been with them even for a brief visit. Dr. Bond roomed with Dr. Walter Cannon at Harvard. While a student at Harvard, Dr. Bond did teaching in the summer to help pay for his education. After college he tried some minor business jobs but acquired a distaste for salesmanship, figures, desks and business, and entered the Harvard Medical School, from where he was graduated in 1908. He had psychiatric experience and training at the McLean Hospital associated with the Massachusetts General Hospital, the Danvers State Hospital in Massachusetts, and in World War II as Major in the Medical Corps. He was Physician-in-Chief of The Institute of the Pennsylvania Hospital, 1922–38, Director of Training and Research from 1938–62, and Consultant from 1962.

Dr. Bond was widely read; he was genuinely a scholar. He published many articles. Perhaps one of his most famous articles was the research on the prognosis of mental illness compared with that in the general hospital. There were many articles on the prognosis of individual diseases in medicine, but none on the outcome of patients as a whole entering the general hospital. He showed that the prognosis of patients going to a psychiatric hospital compared very favorably with the statistics and outcome of those entering the general hospitals. This article tended to break down the feelings of futility with regard to the results of entering a so-called asylum or mental hospital. His building of The Institute of the Pennsylvania Hospital had a similar effect on psychiatry and medicine in general. There was an optimism about psychiatry, an interest in community psychiatry and in

open hospital psychiatry developed at the Pennsylvania Hospital under Dr. Bond's leadership. Dr. Edward Strecker, who first worked under Dr. Bond, published one of his most distinguished papers on Recoverable Reactions in Schizophrenia. This was one of the first break-throughs in the hopeless prognosis early given to dementia praecox or schizophrenia.

Dr. Bond was one of the earliest to see a similarity between the psychology of so-called normal persons and those with mental illness. He pointed out that the differences were merely one of degree. Freud was similarly working with these concepts and was publishing a book called *The Psychopathology of Every Day Life.*

In his most characteristic book (4), *One Mind Common to All,* in 1958, Dr. Bond sketched his development in psychiatry and distilled some of his observations and conclusions. When he started the study of psychiatry he assumed "that abnormal people were in psychiatric hospitals and normal people were outside." In time he came to recognize that "in general there is no difference, except in degree, between the symptoms of patients who have a definite illness of mind than the rest of us, including our leaders." He saw "that the things which mental patients say and do make more and more sense, while the words and actions of ordinary people—much of the time—make less and less. In other words, all of us have partly normal minds."

His experience led to "working not only with people who had neuroses, but also with people who were too tired to work efficiently and with normal people who were in the grip of abnormal circumstances." He wrote of the line-up of our common humanity, "The mind of every man is compounded of elements that are the heritage of his race. Emerson put it well when he wrote: 'There is one mind common to all individual men. Every man is an inlet to the same and to all of the same.' Tolstoy said wisely, 'Every man bears within himself the germs of every human quality, displaying all in turn.' John Donne knew that 'No man is an island,' sufficient unto himself and unconcerned with the needs and problems of others. 'Ask not for whom the bell tolls, it tolls for thee.'" He writes of divine discontent: "The satisfied person is hopeless; men and women, with all their resemblances, are better off to keep those endearing, interesting, unreasoning little differences and anxieties that make each of them an individual in his own right. Deliver us from easy contentment, from uniformity and someone else's ideas of perfection!"

In addition to his many articles and the book, *One Mind Common to All,* he wrote other books: *The Treatment of Behavior Disorders Following Encephalitis* in 1931, *Dr. Kirkbride and His Mental Hospital* in 1947, *Thomas W. Salmon, Psychiatrist* in 1950. (*En passant,* it was Dr. Salmon who advised me to come to Philadelphia to Dr. Bond and Dr. Strecker for my psychiatric residency.) He also wrote some little *Psychiatric Verses* which are distillations of many of his thoughts and observations on human nature. Several may be quoted:

Perfect

Why cannot men and women be
Like snowflakes in their symmetry
No flaw to mar each perfect line
No warmth to melt the whole design.

"The Queen," "The King," "Upset" are observations from the spoiled child, the narcissistic withdrawn queen, the king who married a belle and lived in Hell and the

Infant-Adult

Secure in my dependence
Powerful in my weakness
To some extent, I live.

Then may I give the

Perfectionist

I follow a star that is
Above the heads of men
Athirst I stoop to drink
And the water recedes
My lips never touch completion
Always Alpha, Alpha, Alpha
Never Omega period finis end
Too much becomes too little
Is there some fault
That makes perfection perfect?

A recording by Dr. John Rusk (1965) of some remarks made by Dr. Bond gives a picture of the depth and breadth of this humanitarian, scholar and scientist: "Always I've been wary about adopting a philosophy of life.... Don't fence me in. Don't pin me down. A lot of important things are not circumscribed as definite. I have objected to psychiatrists trying to get definite answers from a patient who is hazy, or lawyers trying to pin down a witness who is doubtful about what he saw. The haze and the doubt are the true things. I'd like to live among people who have not made up their minds and not among people who have answers to every decision that comes before them.

"I like theories which do not shut out new facts but are temporary measures for holding known facts together. It has been said that a beautiful theory can be murdered by an ugly fact, but I do not think that any such theory is beautiful. It's too rigid. In the face of new facts, there's no reason why an outdated theory cannot be laid away with praise for the service it has given. And what about the murder of an innocent fact by an old and power-seeking theory? This is something that happens often. Given the complexities of the human mind, it is wonderful that there are not more schools of psychiatry. It is going against everything I know to say that any *one* of these is 100% right. Again I want to live in a world of compromises, each one of which is the result of hard bargaining with circumstances. No cause, reform, nation, principle, man or woman is 100% right all of the time. To do efficient work one must compromise. With complete preparation at an inconvenient time, a man can go on to help another man or to relieve an injustice.

What the psychiatrist comes to admire is that unselfish love does not need the right time and the right place. There is danger in carrying any principle too far. Even love is not able to substitute for quinine or penicillin. Love and respect for others is limited by love and respect for one's self. I, of course, am a layman in *religious matters.* I have to leave to theologians the debate about problems of good and evil. But, I am something of a professional when love and hate are being discussed. This leads me to want to know —and perhaps this is a kind of philosophy —how dominant is unselfish love in this or that establishment or individual, which or who calls itself or himself religious. If there is hate in them I don't consider them religious. Even in psychiatric experience, I see the overwhelming value of the Golden Rule or its equivalent, and I see the disastrous hate which makes a more powerful man intentionally cause a weaker one to suffer. I think I can leave this topic under the shadow of my favorite philosopher, the late Santayana. I have used his book, *The Last Puritan,* over and over ... I have read his letters. I memorized his Good Friday Prayer. I like the experience he had in being brought up by a mother who was Catholic and then becoming a member of a Puritan family in Boston. Let me quote one sentence from Santayana's essay about my friendly critics. He says: 'My Atheism is true Piety towards the Universe and denies only gods fashioned by men in their own image to be the servants of their human image.' "

Dr. Lauren Smith, Dr. Bond's successor

at the Pennsylvania Hospital, has given an unforgettable perspective (5) of the maturity, the courage, the warmth and almost humor of this great man as he approached death. "Not many hours before he died he was sleeping lightly, and his family was present. He opened his eyes and said:

'From too much love of living,
From hope and fear set free,
We thank with brief thanksgiving
Whatever gods may be,
That no life lives forever;
That dead men rise up never;
That even the weariest river
Winds somewhere safe to sea.'

Douglas, his son, asked him where he got the poem. He said, 'Don't you know your Swinburne?' "

Dr. Bond is survived by his daughter, Mrs. Ann Stitzinger of Philadelphia, and his well-known son, Douglas D. Bond, who is Professor of Psychiatry at the Western Reserve School of Medicine in Cleveland; and five grandchildren, one of whom, Thomas Bond, is a resident in psychiatry at The Institute of the Pennsylvania Hospital.

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Osler and Philadelphia[1]

By FRED B. ROGERS, M.D.[2]

IN his valedictory address, "Aequanimitas", read to medical students and colleagues at the University of Pennsylvania on May 1, 1889, Prof. William Osler cited "the kindliness and goodness which have followed me at every step during the past five years." Referring to Philadelphia as "this Civitas Hippocratica," he added, "whatever the future may have in store of success or of trials, nothing can blot the memory of the happy days I have spent in this city." Now, eighty years after Osler's departure for other parts, his spirit still lingers for good in the Quaker City. For Osler made numerous friends and disciples in Philadelphia—and met and married his wife here. Although the number who knew Osler in person is fast dwindling, younger generation Oslerians heed their words about him today in much the same way as did his own contemporaries.

It is a difficult assignment to say anything about William Osler which is not already familiar to most doctors. Two aspects of his Philadelphia period, however, afford me an opportunity to review some less known details about his ties with this city. The first is Osler's work at the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, and the second, his marriage to Grace Revere Gross, widow of Dr. Samuel W. Gross, who had been a surgeon at the Jefferson Medical College.

Osler was in good company at the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, whose staff he joined early in 1885.[1] This special hospital and clinic, established in 1867, erected new quarters at 17th and Summer Streets two decades later, during Osler's affiliation there. A center serving patients with musculoskeletal and neuropsychiatric disorders, it was supplanted eventually by separate departments in general hospitals and, in 1939, merged with the Hospital of the University of Pennsylvania. Its buildings, however, were used for some years afterward by the present-day Doctors Hospital of Philadelphia.[2]

Twenty-seven out-patient record books from the "Orthopaedic and Nervous", covering the years 1870–1940, are now preserved in the Library of The College of Physicians of Philadelphia. These ledgers are labelled by title: locomotor ataxia, hemiplegia, chorea, local palsies, infantile palsies, paralysis of adults, convulsive diseases, neuralgia, encephalitis, and mental disorders. Most of the volumes are arranged by date, with some indexing by patient names. They constitute a sad anthology and a mine of case material.

The first entry under "treated by Dr. Osler" is that of a 12-year-old girl with chorea seen on January 21, 1885; the last note, recorded on May 8, 1889, concerns a 31-year old man with neurasthenia. During this interval, there are 735 notations of patients examined by Osler. They cover a wide array of clinical problems—from Addison's disease to vertigo. Some of these patients were admitted directly or belatedly from the clinic to the hospital.

It was at the Infirmary for Nervous Diseases that Osler worked with the neuropsychiatrist Dr. S. Weir Mitchell (1829–1914), and his physician-son, Dr. John K. Mitchell (1859–1917). Together they saw a fair number of the "Pucks, Titanias, and Bottoms" of mankind—to borrow Osler's Shakespearean paraphrase. Speaking on "Faith Heal-

[1] Oslerian Oration presented at the Annual Dinner of The Osler Club of London in the Royal College of Physicians of London, England, 14 July 1970.

[2] Temple University School of Medicine, Philadelphia, Pennsylvania 19140.

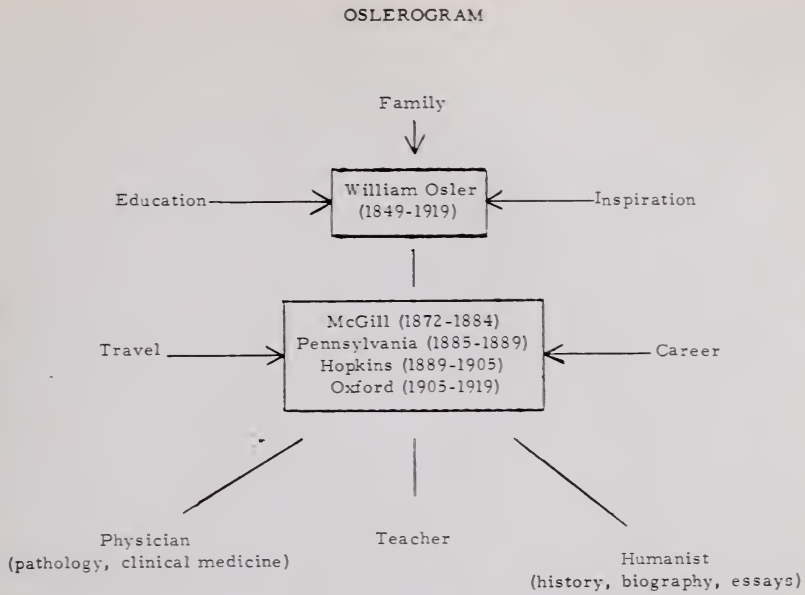

FIG. 1. Oslerogram: schema of the range and extent of Osler's life. (Courtesy of Dr. John S. Welton, Carmel, California.)

ing and Psychotherapeutics" in 1910, Osler noted: "I had the good fortune to be associated for five years with Weir Mitchell, and saw much of the workings of that master mind on the sisters of Sir Galahad and the brothers of Sir Percivale, who flocked to his clinics. His extraordinary success, partly due to the rest treatment, was more largely the result of a personal factor—the deep faith the people had in his power to cure. And it is in this group particularly that the strong man armed with good sense, and with faith in himself—may be a power for good." [3]

Writing at the time of Weir Mitchell's death, Osler said, he was "one of my dearest friends—had I been a son he could not have been kinder to me during the five years of my life in Philadelphia." [4]

It was to Weir Mitchell, too, that Osler dedicated his monograph, *The Cerebral Palsies of Children* (1889). This work stemmed from a series of five lectures delivered at the Infirmary in the spring of 1888. Later, in the preface to his volume, *On Chorea and Choreiform Affections* (1894), Osler wrote, "A very large part of the material utilized in these studies is from the case-books of the Infirmary for Diseases of the Nervous System, Philadelphia.... I have to express my obligations to my former colleagues, Dr. Weir Mitchell, Dr. Wharton Sinkler, and Dr. Morris J. Lewis, who permitted me to use their cases in preparing the statistical details of 554 cases of chorea minor which are in the books to May 1, 1889; also to Dr. Charles Burr and to Dr. Caspar Sharples for great assistance in the tabulation of the cases."

Extending his Philadelphia linkage, Osler returned from Baltimore, in May, 1894, to speak at the opening of the Wistar Institute of Anatomy and Biology at the University of Pennsylvania—long a center for investigation of the structure and function of the nervous system. And after his death, Osler's brain, willed for the Wistar neuroanatomical collection, came to rest in Philadelphia.

Another interesting facet of Osler's Philadelphia stay was his choice of a wife and her lasting links to the city. Recently, Dr. Warner L. Wells has written: "Too often the distaff side of a man is overlooked, but

Fig. 2. Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases. Photograph taken in 1909.

one cannot doubt that Osler's marriage to Grace Revere enlarged his world. Those who knew the two intimately—students, colleagues and friends—have attested to her influence in the continued growth of her husband's professional and academic life." [5]

Grace, daughter of John and Susan Revere of Boston—and great-granddaughter of the patriot-metalsmith, Paul Revere—met Osler through his friendship with her first husband, Dr. Samuel Weissel Gross (1837–89). Son of Dr. Samuel David Gross (1805–84), each was a professor of surgery at the Jefferson Medical College and a founder of the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases. Seven years after his appointment as professor of surgery at Jefferson, the younger Gross died of typhoid fever, on April 16, 1889, at age 52. In his valedictory remarks during the following month, Osler referred to his "zeal, energy, and industry," and described Gross as "a man who bore with honour an honoured name, and who added lustre to the profession of this city."

Dr. Osler was one of four physicians who attended him during the fatal illness. In an obituary, his Canadian friend wrote that Dr. Samuel W. Gross possessed "a genial *bonhomie* and frankness and a warm, hospitable disposition which made his home the natural rendezvous of strangers in Philadelphia." [6] Dr. Gross had been instrumental in persuading Osler to leave Montreal and accept the professorship of clinical medicine at the University of Pennsylvania. And, Gross and his wife often entertained him in their home on Walnut Street. It is said that Osler promised her husband that he would help take care of Grace, should the surgeon not survive. He did that and, in due time, married her.

Fig. 3. Clinic at the Orthopaedic Hospital and Infirmary for Nervous Diseases, 1888. *Left to right:* Drs. Henry W. Cattell, Guy Hinsdale, Isaac P. Willitts, John K. Mitchell, George E. de Schweinitz; Miss Clare Dalziel, Dr. William Osler, Mrs. Green, Dr. Joseph Otto, Jr., Miss Jane Dalziel. (Photograph in College Collections, The College of Physicians of Philadelphia.)

Grace Revere's ties to the Jefferson Medical College went back beyond her marriage to Dr. Gross. Her great uncle, Dr. John Revere (1787–1847), a medical graduate of Edinburgh in 1811, served as professor of materia medica at Jefferson from 1831–40, before moving to New York City.[7]

Widowed after thirteen years of marriage, and without children, Grace Revere Gross remained in Philadelphia, where she took an active interest in the Gross Collection donated to the Library of The College of Physicians in memory of her late husband and father-in-law. Through this benefaction, also, she continued her association with Dr. Osler after he left the city for Baltimore.

William Osler had been elected to the Library Committee of the College in January 1886, to serve with five other members, including Dr. Samuel W. Gross.[8] Though Osler was to leave Philadelphia three years later, he retained a concern for the Library during the rest of his life. In a letter written from Baltimore to Mr. Charles P. Fisher, librarian, on February 13, 1891, Osler noted,

Fig. 4. Grace Revere Osler, photograph taken at Oxford, England, August, 1894.

"I miss the Library very much—for it alone it would be worth returning to Philadelphia."

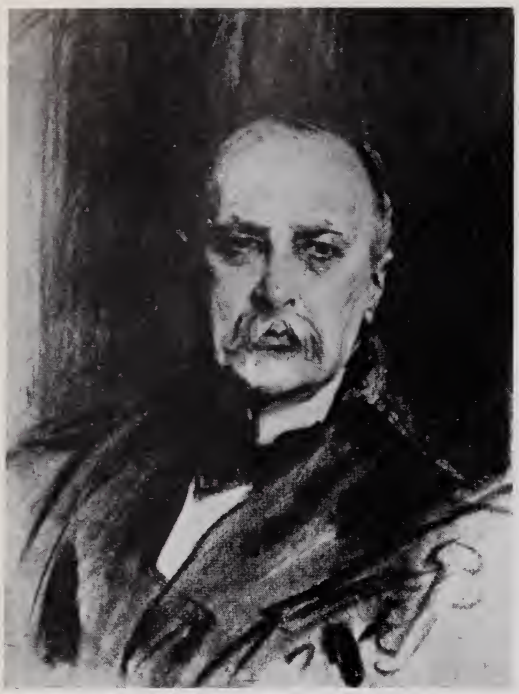

Fig. 5. Charcoal sketch of Sir William Osler, done by John Singer Sargent at his London studio in 1914. Presented to The College of Physicians of Philadelphia in May of that year by Lady Osler.

His future wife's interest in books comes through in another letter, preserved in the Library, written from Baltimore at about the same time.

209 W. Monument Street Thursday Evening

Dear Fisher

I shall be in Philadelphia tomorrow and in the Library about three or four o'clock. Mrs. Gross asked me some time ago to let her know the next time that I would be at the Library for an hour or so as she would like to see the Gross Collection. She asked also about new books, etc. So I have written to say that I would meet her there at 5 p.m. if convenient. I just send you this so as to let you know in case you would like to have any tidying etc. done in the room. From the way she spoke I think she will look after the proper maintenance of the books.

Yours etc.

Wm. Osler

Grace did indeed "look after the proper maintenance of the books." Her correspondence with Mr. Fisher, the last letter dated February 16, 1928, reveals enduring concern and financial support for the superlative Gross Collection. And, after her second husband's death, she saw to it that his bequest to the Library was sent across the Atlantic Ocean in good order.

The courtship of Grace Revere by William Osler was consummated with their marriage in Philadelphia. The Rev. Joseph N. Blanchard, rector, officiated at the wedding at St. James' Episcopal Church, which then stood at 22nd and Walnut Streets, on the afternoon of May 7, 1892. Osler was forty-two and his wife five years younger at the time.

From the United States, in 1905, the Os-

Fig. 6. Dr. Thomas McCrae, portrait by Benedict A. Osuis at Jefferson Medical College. Professor of Medicine at Jefferson (1912–33), McCrae, in 1908, married Amy Gwyn, daughter of Osler's sister Chattie.

lers sailed for England and the last phase of their remarkable lives. Created a Baronet at the inauguration of King George V in 1911, Dr. and Mrs. Osler then became Sir William and Lady Osler. Their son, Lt. Revere Osler, who had been born in Baltimore, was killed in action in 1917, at age 21, while serving with the British Army in France during World War I.

Sir William Osler died at Oxford, of pneumonia, on the last day of the year 1919. Lady Osler, directing the disposition of his famous library, and aiding in the completion of its catalogue, the *Bibliotheca Osleriana,* survived him for nine years. She died at Oxford of a stroke on August 31, 1928. Her ashes, mingled with those of Sir William, found final rest in the Osler Library at his medical *alma mater,* McGill University, Montreal, Canada. Each had lived a full three-score and ten years.[9]

By her will, Lady Osler left £5000 to endow a professorship in surgery at the Jefferson Medical College in memory of Dr. Samuel W. Gross. This bequest, in 1929, established the Grace Revere Osler Professorship of Surgery, and provided for a continuing course of lectures about tumors, a field of great interest to her first husband.[10]

In the list of ten books, "Bedside Library for Medical Students," which concluded his volume, *Aequanimitas* (1904), William Osler listed Ralph Waldo Emerson as an author deserving of careful study. I conclude therefore with a quotation from Emerson's "Resources", which seems appropriate to Osler's career and Philadelphia connections: "In the hands of the discoverer medicine becomes a heroic art. . . . Wherever life is dear he is a demigod."

ACKNOWLEDGMENTS

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Genetic: Environmental Interactions in Schizophrenia[1]

By SEYMOUR S. KETY, M.D.[2]

THE controversy between nature and nurture in human personality, behavior and their disorders continues to plague us. Toward the end of the last century, it was generally accepted that most mental illness was of genetic origin. Then, in this century, with the appreciation of the importance of life experience, the pendulum swung over, and it was widely believed that all mental disease, except for the strictly biochemical disorders among the mentally retarded, was of experiential or environmental origin. In the last few years there has been a reawakening of interest in genetic factors and the accumulation of more definitive evidence for their operation in one or two mental illnesses. The older evidence that intelligence is, to an extent, genetically determined has been rediscovered and reinforced. Thus, the pendulum is beginning to swing once again, and I perceive a tendency for the pendulum to swing back too far toward an excessive emphasis upon genetic factors. I think, therefore, that it is important to discuss some of the new evidence in this area to arrive, perhaps, at a deeper appreciation of the interaction between genetic and environmental factors which takes place in the development of every human characteristic and disease.

I should like to begin with schizophrenia (1), an area in which my colleagues and I have been active for some time, and attempt to consider the evidence which has been used for the operation of genetic factors in schizophrenia. Eliot Slater, who is one of the most significant contributors to this point of view, has recently summarized the evidence that schizophrenia is dependent upon genetic factors (2). He mentions, first, that it is ubiquitous, that it has the same prevalence in different cultures throughout the world. If one examines that evidence, one is a little disappointed that the prevalence of schizophrenia is not known in many different cultures and the cultures in which it has been evaluated have a lot in common. The evidence we have is for western Europe, the United States and for one study in Japan, all of which represent highly industrialized societies. Even so, the prevalence of schizophrenia reported in such countries varies from 0.5% to 1.25%. Even if there were a uniform prevalence throughout the world, I am not sure what that would prove other than to suggest that whatever factors cause schizophrenia occur in a fairly uniform distribution throughout the world.

A better argument is the familial occurrence of schizophrenia. Many observations in the literature have shown a much higher risk for schizophrenia among the close relatives of schizophrenics. The parents, the siblings and the children of schizophrenics show something like a 10 to 15% risk for that illness, while second order relatives have a lower risk but still significantly higher than the risk in the general population, which is less than 1%. I think we can accept that conclusion, which is certainly supported by the experience of most psychiatrists, as a valid one. But, of course, it hardly constitutes crucial evidence for genetic factors in schizophrenia, since a family shares not only a genetic endowment but

[1] Benjamin Musser Lecture XI, The College of Physicians of Philadelphia, 13 May 1970.

[2] Professor of Psychiatry, Harvard Medical School; Director, Psychiatric Research Laboratories, Massachusetts General Hospital, Boston, Massachusetts 02114.

also shares its environmental interactions. The mere fact that a disorder occurs with a high prevalence within families is no more evidence for genetic than for environmental influences; in fact, the same observation has been used to support the idea that schizophrenia is transmitted from parents to children by styles of rearing and interpersonal interactions.

The best evidence which one has had until recently has been that based upon twin studies, the difference in the concordance rate for schizophrenia between monozygotic and dizygotic twins. Slater (2) has reviewed the earlier studies and the authors of the more recent ones have recently summarized their findings (1). All of the early studies agreed on a rather high concordance rate for monozygotic twins, which varied from about 60 to 86%, and a concordance rate for dizygotic twins which was no higher than for siblings. Now certainly, this is quite in accord with the hypothesis that genetic factors operate to a significant extent in the etiology of schizophrenia. However, there are some factors which may not have been completely controlled in these studies and which Rosenthal (3) and I (4) among others have pointed out. Rosenthal adduced evidence that most of these studies were handicapped by a selective bias, since their populations of probands were obtained from schizophrenics in mental hospitals. In such a method of selecting cases, of course, the longer a person spends in a mental hospital the greater chance he has of being included in the sample. Although these findings may be true for the severe, chronic type of schizophrenia, they may not apply to different or milder forms. Other criticisms were made (4); the possibility of subjective bias in the determination of zygocity or in the diagnosis of schizophrenia in the co-twin was pointed out. Since these studies were reported, a substantial number of new studies have been carried out which attempted to take some of these factors into consideration. We have had (1) the study of Tienari in Finland, of Kringlen in Norway, of Gottesman and Shields at the Maudsley in London, and more recently the study of Fischer and co-workers (5) in Denmark and the study of Pollin and his associates on 16,000 twin pairs collected through the National Academy of Sciences-National Research Council from the Veterans Administration (6). In all of these newer studies there is considerable agreement but a somewhat different emphasis than existed in the older studies. These studies have avoided the sampling bias by selecting their index cases not from hospitalized schizophrenics but usually from a total population of twins. Tienari's first study showed a zero concordance rate for schizophrenia among 16 monozygotic twins acquired in this fashion, which is markedly deviant from that of all other studies. He has published, however, careful descriptions of his cases and, more recently, important follow-up information, so that the concordance rate now lies between 6 and 36%, depending upon the breadth that one permits in the diagnosis of schizophrenia in the co-twin. In the studies of Kringlen, of Gottesman and Shields and of Fischer, the concordance rate is very close to 40% and considerably higher than that for dizygotic twins but sharply reduced from the concordance found in the earlier studies. In Pollin's study, a very low concordance rate was found because this sample was selected in another way which affected the results. The sample of twins included only those pairs in which both had served in the military services. This excluded a large number of twins who were unhealthy during adolescence and early adulthood, and accordingly, a lower concordance for schizophrenia was found than in studies which began with total populations of twins. Nevertheless, although that selective bias reduced the number of mentally ill twins of both types, there was a three times higher concordance rate for schizophrenia in monozygotic than in dizygotic twins, while for psychoneurosis

there was no significant difference in concordance between monozygotic and dizygotic pairs. Pollin concluded that his study, along with all the other studies, supported the hypothesis that genetic factors operated in schizophrenia, whereas that did not appear to be the case for psychoneurosis.

Even the best of the twin studies, however, still suffer from another serious handicap which is not easy to remove, which is that monozygotic twins share more of their environment than do dizygotic twins even of the same sex. Monozygotic twins look very much alike and are treated alike by their parents. From a careful study of the background of twins in general, it was possible to analyze (4) the questionnaires which had been submitted to a large sample of monozygotic and dizygotic twins asking a variety of questions regarding the congruity of their environments, questions like: Have you always lived in the same house? Have you always lived in the same room? Have you always slept in the same bed as your twin sister or brother? Have you always had the same teachers? Have you always been in the same class? Have you been separated one day, one week, six months? Summarizing all of this information, one finds clearly that monozygotic twins share much more of their environment than do dizygotic twins even of the same sex. Then, of course, there are questions regarding ego identification that occurs in monozygotic twins and the import that this would have upon their developing similar symptoms and receiving similar diagnoses. These problems can be obviated only by a study of monozygotic twins reared apart.

At the present time there are sixteen cases in the literature (2) of monozygotic twins, at least one of whom has schizophrenia, who were reared separately. Of these sixteen cases, six were separated rather late in childhood, but ten were separated quite early and in these ten, seven of the co-twins had received a diagnosis of schizophrenia for a concordance of 70%. Since there is so much leverage in such cases, it is difficult to avoid the possibility that selective or subjective biases may have been operating either in the diagnosis of schizophrenia in the co-twin or in the detection and reporting of such cases. Here again, the evidence, although quite compelling, is not conclusive.

What about the evidence for the operation of environmental factors in the etiology of schizophrenia? At a gross level there is some correlation between the prevalence of schizophrenia and social class: a higher prevalence in the lower social classes than in the upper. There are many alternative explanations for this, however, including the possibility of an artifact depending upon differences in ascertainment and diagnostic attitudes. There is the hypothesis and the interesting evidence which Dohan (7) has put forth for an important effect of diet in the etiology of schizophrenia. He has obtained some interesting, well-controlled evidence that cereal grains appear to increase the intensity of schizophrenic symptoms and alter the prevalence of schizophrenia in various countries throughout the world. His observations deserve considerable interest and replication.

Most of the environmental studies have centered upon intrafamily relationships as an etiologic factor. With varying degrees of control and objectivity, their procedure has been to examine the personality of the parents of known schizophrenics and the patterns of interaction between parent and child. These have yielded rather remarkable findings that there are marked deviations in the personality of the parents of schizophrenics, including disturbances gross enough to be classed as borderline or true schizophrenia, and in their interaction with each other and with their children. These studies are also subject to a number of criticisms. The early ones did not avoid subjective bias in that the investigator knew when he was examining the parents that they had a schizophrenic child, and it is

possible that the intensity of the search and the magnitude of the findings of schizophrenic tendencies or distorted personality may have been influenced by that fact. Wynne and Singer (8) have been more objective in their evaluation of the personalities of the parents, examining the reports of various projective tests on parents without knowledge of whether they were controls or parents of schizophrenic children. In such objective procedures, they have confirmed the higher incidence of psychopathology in the parents of schizophrenics. Waring and Ricks (9) have examined case records of children brought to a psychiatric clinic by their parents for a variety of emotional disturbances in childhood. They had available voluminous reports on parental personality and interaction made at a time when the diagnosis of the child was non-specific. Retrospective analysis of those records indicated quite clearly certain differences in family behavior and a high rate of schizophrenia-like psychopathology among the parents of the children who eventually became schizophrenic. These workers properly point out, however, that this interesting finding as well as the earlier findings of personality abnormalities in the families of schizophrenics cannot be used as evidence that schizophrenia has an environmental etiology. The parents may be showing a genetic personality defect which is expressed as schizophrenia in the child, so that the results could be used to support genetic as well as environmental theories of transmission.

The most incontrovertible evidence that non-genetic factors operate in the etiology of schizophrenia is the fact that the concordance rate for schizophrenia in monozygotic twins is considerably less than 100%. The concordance rate of 40 to 50%, which the newer studies appear to be showing, leaves a large area for the operation of factors other than genetic, but what they are we do not yet know.

It was for reasons such as these that Rosenthal, Wender and I independently came to the conclusion that there was an approach which could possibly disentangle the genetic from the environmental variables and that was the use of adopted children, since such individuals receive their genetic endowment from one family and have their environmental experiences with another. We soon realized that we were thinking along the same lines and in 1963 decided to pool our efforts and began to gather a population of adopted children who had later become schizophrenic. We wanted to avoid selective bias and realized that it would be necessary to begin with a large population of adopted children and from those determine which had become schizophrenic. For obvious reasons, we quickly realized that a more homogeneous and less mobile population than that which exists in the United States and a country with readily accessible records and cooperative agencies would be essential and decided to undertake our research program in Denmark. We were fortunate to have Dr. Fini Schulsinger, director of psychiatry at the Kommunehospitalet in Copenhagen join us as a collaborator and supervisor of the data-gathering which went on in that country. Our first study (10) was to be addressed to the meaning of the high prevalence for schizophrenia in the families of schizophrenics which, when children are raised with their biological parents, could be a reflection either of genetic or environmental influences or indeed of both. If we could find a population of adopted children who had become schizophrenic and could ascertain the prevalence of schizophrenia and related disorders in their biological and in their adoptive parents, we would have a means of determining whether the high familial incidence represented one or the other of these factors.

In order to avoid selective bias, it was necessary to start with a total sample of adopted children, and this was made available to us in Denmark since all of the adop-

tion records are in the Archives of State Justice. The authorities there were most willing to cooperate with the research and gave us access to their files with, of course, guarantees of complete confidentiality. We decided to include in our sample those individuals old enough to have developed schizophrenia and therefore chose the group of adoptions between 1924 and 1948. We also decided to confine the first study to a sample of manageable size, and therefore limited it to greater Copenhagen, which includes about one-third of the population of Denmark. We made one further restriction, which was to remove from our sample those adoptions by members of the biological family. This brought our sample of adoptions by people unrelated biologically to the child, residing in greater Copenhagen, and where the child would now be within or beyond the age of maximum risk for schizophrenia, to a total of 5,483. That was the sample in which we set out to find those who had developed schizophrenia. In Denmark, that task is made easier because of a remarkable register of the Institute of Human Genetics, which has been carefully maintained since the World War I. Just as we in the United States report certain infectious diseases to the Department of Public Health, the Danish physicians have been reporting a large number of diseases to this Institute at the University of Copenhagen, simply because of the knowledge this might contribute to genetic factors in various disorders. It was fortunate that all neuropsychiatric illnesses had been included in that register and equally fortunate that the Danish mental hospitals are so conscientious. We made an independent check to determine what percentage of mental hospital admissions were actually included in that register and found it to be 95%. There is a state system of medicine in Denmark, only a handful of private psychiatrists and an enlightened attitude about mental illness, so that practically every diagnosed mental illness eventually comes to one of the state psychiatric facilities and is reported to the Institute of Human Genetics.

Since the diagnosis of schizophrenia is such a subjective one, varying from country to country, from school to school, and from psychiatrist to psychiatrist, we decided that we would have to specify in advance what we were going to call schizophrenia for the purposes of this study. Three subcategories, which are considered schizophrenia in the United States but not necessarily so regarded elsewhere, were included. First, we included chronic schizophrenia, the classical, chronically hospitalized schizophrenic patient, a diagnosis that is made with equal facility in Denmark, England, or the United States. We also included the borderline schizophrenic, which is an American diagnosis and is not accepted in Denmark, where the diagnosis would more likely be schizoid personality, schizophreniform psychosis, or psychogenic psychosis, but rarely schizophrenia. The third diagnosis which we decided to accept as schizophrenia was the American diagnosis of acute schizophrenic reaction, which again is not considered schizophrenia in most other countries in the world. We used the standard American psychiatric criteria for the diagnosis of these conditions, but now we had to make these diagnoses ourselves in each case on the basis of the course and symptoms. From the psychiatric register and our independent check, we obtained the name of each adoptee who had ever been admitted to a psychiatric facility for any neuropsychiatric complaint, a total of 507 or about 9% of the sample. These hospital records were then abstracted, translated into English, and then individually evaluated by the four of us. Where each independently called the case schizophrenia, it became an index case. If one of us raised the question of schizophrenia, more information was obtained about that individual, a conference was held among us, and if a consensus was reached that the individual was schizophrenic, he

also became an index case. In this way, we discovered 33 cases of schizophrenia of one or another of these types in the sample of adoptees, which is an incidence of 0.6%.

We now wanted another group of adoptees in order to control a number of the variables which we anticipated. From the remainder of the adoptee population (those adoptees who had never been admitted to a psychiatric facility), we selected 33 adoptees who matched each of the index cases in age, sex, socioeconomic class of the adoptive parents, in length of time spent with the biological family and in preadoptive history.

Table I summarizes the characteristics of the schizophrenic index cases and their controls. There is the same number of males and females in each group and the cases are of approximately the same age and social class because they were matched for these. The bulk of them spent relatively little time with their biological parents, one month or less, but a few remained longer with their biological parents. At this stage we did not dare to reject any cases, since we did not know how large our sample was going to be, and retained these in our sample even though we would have preferred to include only those separated close to birth. Although the index cases and controls compare very well regarding age of biological mother and father, both of these groups show a considerable difference in age between the biological parents and the adoptive parents, which is, of course, what one would expect. Biological parents, in general, tend to be younger than adoptive parents. The socioecenomic class of the biological parents may be different from that of the adoptive parents. The amount of psychopathology in each group might be different, since the adoptive parents often have been screened to rule out any overt psychosis, whereas the biological parents would not; in fact, there might even be a tendency toward a greater amount of emotional disturbance among them. For all of

TABLE I

Some Characteristics of the Schizophrenic Index Cases and Their Matched Controls

	Index Cases	Controls
Number	33	33
Males:Females	18:15	18:15
With biological parent(s) for:		
less than 1 month	19	20
1 month to 3 months	6	4
3+ months to 6 months	2	2
6+ months to 12 months	5	4
1+ to 2 years	0	2
more than 2 years	1	1
Months spent with biological parent(s)	3.5	4.1
Months spent in children's institution	10.2	8.0
Months spent in foster home	3.6	3.7
Age (months) at transfer to adoptive parents	18.3	16.0
Age (months) at legal adoption	38.0	33.5
Socioeconomic class of adoptive parents	3.0	3.0
Mean age, Jan. 1, 1967 (years)	36.1	35.9
Mean year of birth:		
Probands	1931	1931
Biological mother	1906	1909
Biological father	1907	1906
Adoptive mother	1896	1900
Adoptive father	1895	1895

these reasons, then, we must remember that we have two quite different populations: the adoptive families and the biological families. We will also see that the composition of the families is quite different. The adoptive families have relatively few siblings of the index case, whereas the biological families have generated siblings and especially half siblings, being young and, in some cases, promiscuous. Therefore, one cannot compare the prevalence of mental illness in the biological family against that in the adoptive family, and one cannot draw conclusions about the relative weights of genetic and environmental factors. But, by virtue of the fact that there are controls in each group, one can test independently whether or not there is significant evidence of genetic factors and whether or not certain environmental factors have operated.

Now, for these 33 index cases and their controls, our next task was to identify the biological and the adoptive relatives of these individuals, and this, too, is facilitated by the Danish records. The adoption forms give us a great deal of information. They list, in practically all cases, the names of the adoptive parents, their address, and a great deal of information about their socioeconomic class. They also list the names of the biological mother and the putative biological father; the latter, of course, is not entirely reliable. In Denmark the information may be more reliable, however, since there it is not enough for the mother simply to name a man as father. He must acknowledge paternity and also must contribute to the cost of delivery and of adoption, so that there is a reasonably good chance that the putative father was the biological father in most cases.

It was also necessary to identify the siblings and half siblings of these index cases, and for this we were able to take advantage of a remarkable population register, called the Folkeregister, which lists every Dane—in fact, anyone who has lived in Denmark for more than a few weeks—his address, and every address that he has ever lived in since birth, every household, every family member, or everyone else that he has lived with in the same flat or house. From this register it is possible to trace back and to find all of the other children of each biological parent. These would then be either full siblings or half siblings of the adoptee. In the same way we found the adoptive siblings and half siblings of the 33 index cases and their controls.

In this way, we were able to identify, in all, 306 biological relatives: 63 parents of index cases and 63 parents of controls, 2 and 5 siblings, 85 and 88 half siblings, respectively. The number of adoptive relatives identified was 157, of which 63 and 66 were parents of index cases and controls, 8 and 17 were siblings, 3 and 0 were half siblings, respectively. With these names it was our next problem to seek any evidence of any kind of mental illness among them. We realized that we could no longer afford the luxury of rejecting cases that didn't fulfill all of our criteria as we had done in selecting only clear-cut index cases. It was now necessary that we make the best kind of diagnosis possible on the basis of whatever information we could obtain for each of these relatives. We had also developed, by this time, a hypothesis based upon the findings in many of the twin studies, in which the concordant co-twin did not always show typical schizophrenia, but frequently a mild or atypical form. Our hypothesis was that schizophrenia is not transmitted as such, but as a much broader and vaguer kind of personality defect. We characterized a group of schizophrenia-related disorders, which we called the "schizophrenia spectrum of disorders," which started with the most severe disturbances, the bona fide schizophrenics of one or the other of our three classes, continuing through 3 additional categories of questionable chronic, acute, or borderline schizophrenia, in which the diagnosis of schizophrenia was not as obvious but in which it was strongly sug-

gested on the basis of the information which we had. Finally, we included at the mildest end of the schizophrenia spectrum another diagnosis which is made in America and is part of the standard psychiatric nomenclature, "inadequate personality." We had found in our selection of index cases that there was great difficulty in separating inadequate personality from mild borderline schizophrenia, and this presented to us the possibility that the so-called inadequate personality in American psychiatry is a mild form of borderline schizophrenia. We had deliberately shuffled together the index and control adoptees so that identification of family members was done by assistants who did not know which was which. Psychiatric information was now obtained for randomly assorted relatives without knowledge of whether they were biological or adoptive relatives of index or control cases.

A search was now made through the Institute of Human Genetics, all of the psychiatric hospitals and services and also through a large number of other sources of information about mental disturbances: the mothers' aid agency, military records of those males who had been rejected for or discharged from military service for any psychiatric reason, and those police records where questions of psychiatric illness had been raised. All of this combined to give us some kind of information regarding possible mental disturbance or illness in 67 of the relatives. Whatever information we had was then abstracted, translated into English, and then edited to remove any clues which to a sophisticated reader might identify a relative as biological or adoptive of an index or control proband. These edited English abstracts were sent to each of the four collaborators who made an independent diagnosis regarding presence or absence of schizophrenia spectrum disorder, other form of psychiatric illness, and the specific diagnosis. Where we all agreed, that became the diagnosis for the relative. Where we disagreed, we would have a conference and attempt to arrive at a consensus diagnosis. In four relatives, we were unable to arrive at a consensus and those were not included in our further analysis. They would not have affected the results significantly had they been included.

Having made a consensus diagnosis on each relative, we then decoded the relationship, permitting an examination of the prevalence and types of mental illness among the biological and adoptive relatives of the index cases in comparison with the controls. There is a somewhat higher prevalence of mental illness generally in the biological relatives of index cases as compared with their controls (30 against 17), and this is due to a much higher prevalence of schizophrenia spectrum disorders (13 against 3; Table II). The nonschizophrenic illnesses were randomly distributed (17 against 14). The increased prevalence of schizophrenia spectrum disorders among biological relatives of the index cases is highly significant. On the other hand, among the adoptive relatives there is a relatively small incidence of schizophrenia-related disorders and certainly no higher in the adoptive relatives of index cases than controls.

Since we did not know how large a sample of index cases we would be able to find, we had not rejected from our original sample adoptees who had spent an appreciable time with biological relatives. Fourteen of the index cases had spent one month or more with biological relatives.

There were 19 index cases and 20 controls, however, who were separated from their biological families during the first month of life; as a matter of fact, most were separated within the first week, when the child and the mother left the maternity hospital by different doors into separate lives. This comes close to the ideal sample by which to disentangle genetic from environmental contributions. There is still a high prevalence of schizophrenia-related disorder in the biological relatives of the in-

TABLE II

DISTRIBUTION OF SCHIZOPHRENIA SPECTRUM DISORDERS AMONG THE BIOLOGICAL AND ADOPTIVE RELATIVES OF SCHIZOPHRENIC INDEX CASES AND CONTROLS

	Biological Relatives	Adoptive Relatives
Total sample of 33 index cases and 33 controls		
Index Cases	13/150	2/74
Controls	3/156	3/83
p (one sided, from exact distribution)	0.0072	N.S.
Subsample of 19 index cases and 20 controls separated from biological family within 1 month of birth		
Index Cases	9/93	2/45
Controls	0/92	1/51
p	0.0018	N.S.

Numerators = number with schizophrenia, uncertain schizophrenia or inadequate personality.
Denominators = number of identified relatives.

dex cases (Table II), but now there is none in the controls, whereas in the total sample there were three. All three of those instances occurred in control children who were kept with their biological families and put out for adoption later. In fact, mental illness in a parent may have prompted that expedient. When we remove that kind of selective bias, we find that the control relatives have a very low risk for schizophrenia-related disorder, no higher than the population in general. Again, there is no significant difference between the index and control adoptive relatives.

Now, what are the conclusions that one may properly draw from all of these findings? I think it is fair to conclude from the significantly high prevalence of schizophrenia-related disorders in the index biological relatives that there is evidence for the significant operation of genetic factors in the transmission of schizophrenia. But a further question arises. What about *in utero* environmental factors? Seven of the 13 biological relatives of index cases with schizophrenia-related disorders are paternal half siblings, and such relatives share with the index case not even an *in utero* environment, but only a certain amount of genetic overlap. On that basis we feel that what we are observing here is the operation of genetic factors rather than early environmental ones.

We do not feel, however, that on the basis of these data, it is permissible to suggest that environmental factors play no role, or a minor role in this disorder. In the first place, one does not disprove a hypothesis, one simply fails to substantiate it; but more important, we were examining through the adoptive family only one environmental factor, namely, the presence or absence of mental illness in a family member. There were thousands of environmental factors, however, which we were not examining in this study: the personalities of the adoptive relatives, their child-rearing practices, diet, lead in the drinking water, infection, and many other environmental influences. The possibility is still a good one that environmental factors are important in the etiology of schizophrenia. In fact, our own feeling is that they operate in important ways but ways that still remain to be characterized.

In Table III one finds the distribution of the types of schizophrenia-related disorders among the biological relatives of the index cases according to the three diagnostic categories we had used in selecting the 33 index cases. There were 16 chronic schizophrenics, 7 acute schizophrenic reactions and 10 borderline schizophrenics. We identified for each group a certain number of biological relatives: 82 for the chronic schizophrenics, 30 for the acute schizophrenics, and 38 for the borderline. The distribution of schizophrenia spectrum disorders among the biological relatives shows some very interesting features.

It is apparent that the index cases diagnosed as acute schizophrenic reaction had

no schizophrenia-related disorders in their biological relatives, and, conversely, acute schizophrenic reactions, definite or questionable, are absent in the families of any of the schizophrenic index cases. This suggests to us that nonrecurrent "acute schizophrenic reaction" is a disorder unrelated to schizophrenia and that the European and English psychiatrists are right in refusing to call it a schizophrenic disorder, unless there is evidence for chronic recurrence or a more disturbed premorbid history. On the other hand, the borderline schizophrenics, which the Europeans and the English do not recognize as schizophrenia, show a pattern of schizophrenia-related disorders in their biological families remarkably similar to that in the relatives of the chronic schizophrenics. From the types and severity of illness in the biological family, one would be unable to tell whether that was the family of a chronic or a borderline schizophrenic. This suggests that in this instance the American psychiatrists are correct in regarding borderline illness as a form of schizophrenia but of milder degree.

The fact that the biological families of 16 classical chronic schizophrenics show only one instance of typical chronic schizophrenia among 7 relatives with disorders covering the spectrum of schizophrenia-like but much milder disturbances suggests to us that what is transmitted genetically is not schizophrenia as such, but a predisposition or vulnerability to schizophrenia requiring other factors, probably environmental ones, before it becomes manifest as schizophrenia. It is quite possible that where an individual will find himself in the schizophrenia spectrum of disorders depends to some extent perhaps upon some special combination of multiple genes. Probably more important, however, it would require an interaction with particular environmental factors. Thus, whether a person emerges as a chronic schizophrenic, as a borderline schizophrenic, as an inadequate personality, or, for that matter, simply as an eccentric person, or even as a creative individual (there is some evidence for an association of that trait with schizophrenia), may depend upon the operation of essential environmental factors. Unfortunately, I cannot at this time indicate, or even suggest, what these environmental factors may be, but it may be possible sometime to define them more exactly. At the present time, we are engaged in extending this study to all of Denmark, which will increase the number of index cases by two- or three-fold. We are also engaged in intensive interviews with all of the relatives, interviews which will elicit as much information as we can obtain, dealing with types of psychopathology, which may never have been recognized: personality characteristics, child-rearing practices, and a large variety of environmental factors. We are hoping that from the large amount of information which we obtain from each of these interviews, it may be possible to find some environmental

TABLE III

TYPE OF SCHIZOPHRENIA SPECTRUM DISORDER FOUND IN THE BIOLOGICAL RELATIVES OF EACH TYPE OF INDEX CASE

	Index Cases		
	Chronic Schizophrenic	Acute Schizophrenic	Borderline Schizophrenic
No. of index cases	16	7	10
No. of biological relatives	82	30	38
Biological relatives with:			
Chronic schizophrenia	1	0	0
Acute schizophrenia	0	0	0
Borderline schizophrenia	3	0	3
? Chronic schizophrenia	0	0	1
? Acute schizophrenia	0	0	0
? Borderline schizophrenia	2	0	1
Inadequate personality	1	0	1

characteristics which are significantly more common among the adoptive families which have reared schizophrenics. This may permit the development and testing of hypotheses dealing with the environmental requirements which, superimposed on genetic vulnerability, result in diagnosable schizophrenia.

We have refrained from calculating a "heritability index" or otherwise attempting to evaluate the relative strengths of genetic and environmental factors in the transmission of schizophrenia. As a matter of fact, for a trait which requires both factors, such evaluations are illusory and reflect largely the range of variance for those factors in the particular sample under examination.

In the case of intelligence, another quality which undoubtedly requires both genetic and environmental factors, a spuriously high "heritability index" can be calculated from populations of relatively uniform middle class environments where the variance is largely genetic. Were one able to carry out a study in which genetic factors were held within a narrow range but environments were markedly altered, the results would be just the opposite. Thus, a population of monozygotic twins, where one of each pair developed in a malnourished mother, was born prematurely or traumatically, suffered from infantile dietary insufficiency and was reared in an intellectually impoverished home would undoubtedly yield results which would show that the I.Q. was largely determined by environment.

In the case of intelligence, as in the case of schizophrenia, it is probably an idle pastime to continue the debate over the relative importance of genetic and environmental factors. It seems clear that both are important and the next task is to define more clearly the mode of genetic transmission and the specific environmental factors which operate. Where a quality or a disorder requires both types of factors for its transmission one has a two-edged weapon to use in its control. Eugenics would affect the distribution of genes in the population, but an equally effective and appropriate expedient in a democratic society would be to understand and improve the crucial factors in the environment.

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A Tribute to Ella N. Wade[1]

By GEORGE I. BLUMSTEIN, M.D.[2]

ABOVE and beyond anything which the Fellows or the Officers of the College have been able to contribute have been the loyal and devoted services of several of its key personnel. As officers and committee appointments rotated, it was to them that we looked for improvement in and continuity of growth, public relations and internal operations. If one reads the history of our activities in the 20th Century, he is struck with the manner in which a relatively small group of dedicated employees helped run this institution. During their long tenure, they were generally taken for granted and seldom given the credit they so richly earned for the efforts they expended on our behalf, most of them beyond the call of duty, to say nothing of untold hours of additional and uncompensated time spent in fulfillment of what they considered their responsibilities. This was their baby, so to speak, and what you see here today is the result of the tender loving care they bestowed on it.

Tonight it is a pleasure to honor one of the most devoted employees, Mrs. Ella N. Wade, who has been custodian of the Mütter Museum and College Collections since 1939, a period of thirty-one years. At the suggestion of Dr. Francis C. Wood, she has completed a scholarly and detailed report of her custodianship which is being studied by various committees with a view towards publishing it. Having given her all to this prominent activity of the College, she has now decided to retire and lead a more leisurely existence.

Words alone are an inadequate expression of the debt we owe her and the high regard we have for her. In the hope that this little gift will convey feelings which words fail to do, may I on behalf of the Officers and Fellows of the College present to you, Mrs. Wade, a memento of our affections and best wishes for good health and pleasantries in the years ahead.

[1] Remarks made at a Stated Meeting of The College of Physicians of Philadelphia, 13 May 1970.

[2] President, The College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, Pennsylvania 19103.

FIG. 1. Mrs. Ella N. Wade receives standing applause led by Drs. George I. Blumstein (right) and John L. McClenahan.

History of Medicine: The Eighteenth-Century Systematists

Program in the History and Philosophy of Science
under the auspices of
the American Philosophical Society,
Bryn Mawr College, and
the University of Pennsylvania,
with the assistance of the Josiah Macy, Jr. Foundation (1970).

January 20	Science, Society, and Medicine Richard H. Shryock, Ph.D. American Philosophical Society
February 3	Boerhaave Lester S. King, M.D. Senior Editor, Journal of the American Medical Association
February 17	Haller Nikolaus Mani, M.D. University of Wisconsin
March 3	Cullen L. R. C. Agnew, M.D. University of California, Los Angeles
March 17	John Brown Guenter B. Risse, M.D. University of Minnesota
March 31	Paris Clinical School Nikolaus Mani, M.D. University of Wisconsin
April 14	Broussais George Rosen, M.D., Ph.D. Yale University
April 28	Hahnemann Martin Kaufman, Ph.D. University of Massachusetts

These sessions were held on Tuesdays at 7:30 p.m. at The College of Physicians of Philadelphia, 19 South 22nd Street.

Memoir of Earl A. Daugherty 1902–1968*

By MALCOLM W. MILLER, M.D.

ON June 28, 1968, Earl A. Daugherty, M.D., dedicated physician, devoted husband and father, loyal friend and Fellow of The College of Physicians of Philadelphia for many years, died quietly in Lankenau Hospital after a protracted illness.

Earl was born in Philadelphia, Pennsylvania, on July 12, 1902. In 1926 he received a B.S. degree from Muhlenberg College and went on to Jefferson Medical College from where he was graduated with an M.D. degree in 1930.

On November 4, 1931, he married Jessie Frailey of Philadelphia and their union was blessed with a son, Richard L. Daugherty, who was born October 18, 1935.

"Doc," as he was known affectionately by his many friends, interned at Methodist Hospital, Philadelphia (1930–31), and was Chief Resident Physician at the same institution (1931–34). He was licensed to practice in Pennsylvania in 1932, took post-graduate work in cardiology at Massachusetts General Hospital in 1945 and was certified in internal medicine in 1949. His sub-specialty interests were cardiology and diabetes.

He was affiliated with Methodist Hospital as Assistant in Medicine (1934–40), with Presbyterian Hospital as a Clinical Assistant, Diabetes (1935–40), and with Lankenau Hospital from 1937 until the time of his death, where he was an Associate Physician in the Department of Internal Medicine.

Dr. Daugherty was a member of the Philadelphia County Medical Society, The Pennsylvania Medical Society, American Medical Association and the Heart Association of Southeastern Pennsylvania. He was a Fellow of The College of Physicians of Philadelphia and The American College of Physicians.

"Doc" was a delightful companion, always good-natured, a perfect gentleman, a wonderful storyteller and a warm-hearted close friend. He is missed by each of us who knew him.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Thomas Klein 1891–1970*

By RUSSELL S. BOLES, M.D.

THOMAS KLEIN, M.D., died April 18, 1970 at his home in Bala-Cynwyd, Pa. He was 78. Dr. Klein was born in Ambia, Indiana, on August 3, 1891. He was graduated from the University of Illinois and received his medical degree from the Medico-Chirurgical College of Philadelphia in 1913. He interned at Philadelphia General Hospital.

Early in his career he was office assistant to Dr. George Morris Piersol and, on the resignation of Dr. Piersol from the Philadelphia General Hospital, Dr. Klein was appointed physician of the Department of Medicine, in which capacity he succeeded Dr. Piersol. He served at various times on the service of Dr. Joseph Sailer and Dr. Robert Torrey in the Medical Department at Philadelphia General Hospital and on the service of Dr. Francine in the Department for Tuberculosis. He served as Chief of Service in the Medical Department at the Philadelphia General Hospital. He was intensely interested in the affairs of the Hospital and contributed much as a member of the Executive Committee of the Medical Board in establishing the Hospital as one of the best in the land in those days. He resigned from the staff of the Hospital as Visiting Physician to the Medical Department on March 18, 1947, and was appointed Active Consulting Physician to the Department on June 5, 1947.

Dr. Klein in his early years distinguished himself as a superb teacher and, in addition to his activities at the Philadelphia General Hospital, he became Professor of Clinical Medicine at Temple University School of Medicine and Associate Professor of Medicine at the University of Pennsylvania Graduate School of Medicine. He also served as Chief of Medicine at the Presbyterian Hospital in Philadelphia. Dr. Klein was elected a Fellow of the American College of Physicians in 1930, and was a Diplomate of the American Board of Internal Medicine. He was Chairman of Exhibits of the American College of Physicians for 17 years until his retirement in 1961. He was also a Fellow of The College of Physicians of Philadelphia and a member of the Philadelphia County Medical Society, the Pennsylvania Medical Society, American Medical Association, and the American Clinical and Climatological Association, in which he took an exceedingly active part. He was also a member of the Pine Valley Country Club and the Philadelphia Country Club. In both of these clubs he pursued actively his hobby of golf, which was his chief extracurricular activity.

Dr. Klein is survived by his wife, Mrs. Margaret Logan Klein, 191 Presidential Boulevard, Bala-Cynwyd, Pa. 19004, and two sons, Thomas W. and Gilbert W.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Walter Hirst Lindsey 1894–1968*

By JOSEPH STOKES, JR., M.D.

WALTER HIRST LINDSEY, M.D., was born in Mercer, Pennsylvania, on June 27, 1894 and died October 1, 1968 at Doylestown, Pennsylvania.

He was graduated from the Sharon High School, Sharon, Pennsylvania in 1912 and from Westminister College, New Wilmington, Pennsylvania, in 1916 with an A.B. degree.

His medical school record in the Class of 1920 at the University of Pennsylvania was excellent, for which reason he was elected as a member of the honorary society, Alpha Omega Alpha. He has always been remembered as a quiet, rather retiring but extremely hard worker with kindly manners and approach. He interned at the Episcopal Hospital and shortly afterwards started work in industrial medicine with the Philadelphia Rapid Transit Company until his retirement in 1959. In 1940 he had moved from Philadelphia to Perkasie where he had a farm and where he greatly enjoyed woodcarving, gardening, farming, as well as music and literature. He also was an expert photographer. Because of a heart attack and emphysema, in 1960 he and his wife moved to the Cross Keys section of Doylestown. Also because of a cerebral accident in late 1964, he had to stop driving his automobile and became bed-fast until his death four years later.

He was elected a Fellow of The College of Physicians of Philadelphia on January 10, 1927 with Dr. Samuel B. Sturgis and Dr. Isaac Starr. He had no children and is survived by his widow who lives at 579 Jefferson Avenue, Warminster, Pennsylvania.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Benjamin D. Parish, Sr. 1877–1968*

By WILLIAM U. McCLENAHAN, M.D.

DR. BENJAMIN D. PARISH, SR., was born in Philadelphia, Pa., on July 8, 1877. His father, Dr. William Henry Parish, practiced obstetrics and gynecology in Philadelphia after completing his duties in the Medical Corps of the Union Army during the Civil War. In 1895, Dr. Parish graduated from the Delancey School and matriculated at the University of Pennsylvania, graduating with the degree of Bacheolor of Science in 1899. In 1892, he married Helen Griffith. His chief hospital affiliation throughout most of his life was St. Agnes Hospital. There he served his interneship in 1902, was Chief of the Surgical Outpatient Department (1903–4), Otologist and Laryngologist (1906–31), President of the Staff (1934–35), and Consultant from 1935 to his death. From 1906–17, he was Instructor in Otology at the University of Pennsylvania School of Medicine and Associate Professor at the University of Pennsylvania Graduate School of Medicine from 1920–27. He was Consulting Laryngologist to the Kensington Hospital for Women, Oncologic Hospital, Norristown State Hospital, United States Naval Hospital, Philadelphia, and Roosevelt Hospital, Philadelphia. From 1920–46, Dr. Parish was the Otolaryngologist to the Chestnut Hill Hospital, President of the Staff in 1937, and Consultant since 1946. He published case reports in the Annals of Otology and Laryngoscopy journals. His military duty in the United States Naval Reserve extended from 1917–19 and in the United States Navy Active Reserve, from 1921–48. He was a member of the following societies: Philadelphia County Medical, Pennsylvania Medical Society, American Medical Association, The College of Physicians of Philadelphia, American College of Surgeons, Philadelphia Laryngological Society, Philadelphia Medical Club, Philadelphia Alpha Sigma Medical Fraternity, Free Mason, Military Order of Foreign Wars.

Death occurred suddenly and unexpectedly on March 29, 1968, while he was seated on a bench on the lawn under the trees of the Cresheim Arms Hotel, as he was feeding the squirrels.

Many of us here today knew and appreciated his personal qualities as a man and a friend. In view of the many years of his retirement, he was indeed fortunate to have interests other than medicine. His greatest hobby was horticulture, and he spent many hours in his garden. Bridge was a second source of pleasure in which he showed unusual skill. He was one of the oldest members of the Inter-Hospital Bridge Whist Association of Philadelphia and Vicinity. (We might say that Ben, Jr.'s devotion to bridge is hereditary.)

Dr. Parish never lost his loyalty to the Navy. In almost every conversation, reference was made to his past naval service. All through his life—unaffected, in fact, and mellowed by the passing years—he retained a sense of humor, associated with a merry twinkle of the eyes and a lovely smile. Certainly, he possessed to an unusual degree the qualities of a gentleman, a personal charm especially activated in female company. In this connection, those concerned with the subject of hereditary traits might be interested to know that Dr. Parish's grandfather (born in 1806, Williams College 1828, Princeton Theological Seminary 1831) was married five times. Just as every

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rose has its thorns, so our gentleman possessed a stubborness and inflexibility which, over the years, presented difficult problems to his family and to his personal physician. The latter shared in three Parish wars: the loss of his driver's license, the restriction in management of his bank account, and the pressure for his admission to a nursing home. Thank God his last battle was victorious, a fact both Ben and I now gladly admit.

Before closing, and to round out completely this memoir, I feel it most appropriate to mention Dr. Parish's family. All men, in every profession, have their record influenced by their homes. Mrs. Parish was a quiet, charming lady who shared her husband's interest in gardens, furniture and art, matched him in determination and surpassed him in business acumen. She took an active part in hospital and church work. When not a patient at the Chestnut Hill Hospital (which was frequent in her latter years), and with convalescence barely complete, she would return to her duties as nurse's aid. Dr. and Mrs. Parish's second son, Dr. Warren Griffith Parish, was killed in action at Guam, on July 26, 1944, and received the Navy Cross posthumously.

Ben, Jr. you all know, admire and love. His enormous interest in and work for the Chestnut Hill Hospital speak for themselves. From my close association with him and his father for the past years, let me say, in all truth and sincerity, that I have never seen such untiring filial devotion and care exercised under frequently difficult circumstances. Nowadays, with increasing home and professional demands, this quality of character in a physician is, indeed, rare. We salute this ancient virtue; we pray for its survival, and we hope to find a trace of it in ourselves and in our children. Not long ago, a wise man said, "No man has parents until he has children."

Memoir of Leon Nathaniel Prince 1906–1970*

By SAMUEL X RADBILL, M.D.

THE trend to full-time, salaried medical teaching, now in full swing, is a recent phenomenon. Originally the American medical educator was sort of a private entrepreneur, collecting tuition fees directly from his students and allotting to them only part of his time. Toward the end of the 19th Century, however, as many medical schools became university affiliated, a system of voluntary teaching arose in which the doctor gave freely of his time and skills to instruction of medical students. This was done for the most part without any emolument. It was to this generous class of medical educators that Leon N. Prince, M.D., belonged. Associate Professor of Obstetrics and Gynecology at Jefferson Medical College, he contributed, after joining the faculty in 1941, many long, trying hours to the instruction of his students for nearly a quarter of a century. He introduced the undergraduates to the mysteries of the obstetrical art on a cleverly devised manikin, as well as by clinical demonstration and by word of mouth. To the interns and residents he was a bulwark of support when they needed help, appearing promptly in emergencies night and day, undeterred by storm or fatigue, and regardless of personal comfort or pleasure.

He was born in Philadelphia in 1906 and spent his childhood in Trenton, N.J. His family returning to Philadelphia, he received his high school education at Central High, after which he enrolled in Brown Preparatory School. From William and Mary College he received a B.S., and from Jefferson Medical College he received his M.D. in 1933. After internship at St. Joseph's Hospital of Philadelphia, he went into general practice in South Philadelphia in 1934 and for sixteen years devoted his services to the obstetrical ward of St. Vincent's Hospital, where he became chief. In 1941, he was appointed assistant on the obstetrical ward at Jefferson; there he worked to the day of his death. To the medical literature he contributed a number of papers, the special field of his interest being perinatal mortality and morbidity. During World War II he served with the rank of Lieutenant Commander, his service including two years overseas in the Atlantic Theatre on the U.S.S. Knoxville.

A diplomate of the American Board of Obstetrics and Gynecology, he was a founder member of the American College of Obstetricians and Gynecologists, a member of the council of the Philadelphia Obstetrical Society, a Fellow of the American College of Surgeons, of the American Medical Association and many other professional organizations. With a deep interest in life and in people, he was a member of that genial group, the Medical Club of Philadelphia. His father was a cigar maker, which may account for his love of a good cigar. He was devoted to his mother, who, at 84, still survives him. He married Marie J. De Prisco; Mrs. Prince, active in many women's civic and educational organizations, is a past president of the Women's Auxiliary of the Philadelphia County Medical Society. His son, Robert L., an accomplished pianist, was graduated from Jefferson Medical College and is now on his way to eminence in psychiatry. One daughter, Miss Patricia Prince, is a psychiatric social worker; his other daughter, Barbara, is Mrs. Paul Cirilis. Lee Prince liked to travel, but was al-

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ways happiest when with his family. He could play the violin and passed on to his children his love for music. A good judge of food and fine wine, once or twice a year he joined in the festivities of a Jefferson gourmet group.

He died January 27, 1970. In accord with praiseworthy tradition, Jefferson Medical College pays tribute to his memory with a wreath placed in the Hall of the College and a plaque on which is inscribed:

"A loyal and devoted Jeffersonian, an active alumnus, dedicated to his profession and to our students, generous friend to many, ever smiling and ever willing to help." Such was Leon N. Prince.

Memoir of Joseph A. Scarano
1901–1970*

By ROMEO A. LUONGO, M.D.

JOSEPH A. SCARANO, M.D., Chief of the Ear, Nose and Throat Service at St. Agnes Hospital for the last ten years, died at his home, 1432 South Broad Street, on January 28, 1970. He was 68.

He had been a practicing otolaryngologist for thirty-eight years in Philadelphia, with his office in his home.

Born in Philadelphia on October 3, 1901, Dr. Scarano was a graduate of St. Joseph's College in 1924 and Jefferson Medical College in 1928. He interned at St. Agnes Hospital.

Dr. Scarano was a member of the Catholic Physicians Guild, chancellor of the Graduate Club, and a fourth degree member of DeSoto Council, Knights of Columbus.

He was also a member of the American Medical Association, the Pennsylvania Society of Ophthalmology and Otolaryngology, the Pennsylvania Medical Society, the Pennsylvania Public Health Society, the Physicians Motor Club and the Medical Club of Philadelphia.

Surviving are his wife, the former Emma A. Schuster, two sons, Dr. Joseph J. and Dr. Victor R., ten grandchildren, a brother and three sisters.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Samuel Simkins 1907–1969*

By MARTIN M. MANDEL, M.D.

SAMUEL SIMKINS, M.D., was born in Philadelphia and was graduated from the Philadelphia Public Schools. He completed his medical education at the University of Pennsylvania and practiced internal medicine and endocrinology in the Olney section of Philadelphia.

Sam was a sincere and concerned practitioner who exhibited an interest, not only in the clinical phases of endocrinology, but in the research aspects of this new field. He was an avid researcher who devoted many hours in the laboratory studying the effects of hormones in the human body. His clinical practice reflected the results of his research, in that he had a much greater insight into the treatment of the patient suffering from endocrine disorders.

His interests were not limited to medicine alone, for he was an avid musician and accomplished pianist. His brother is a violinist of the Philadelphia Orchestra, and Sam was frequently seen in the Academy of Music because of his intense interest in classical music. He was a devoted father and husband. He is survived by his widow and two children.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Philip F. Williams 1884–1970*

By S. LEON ISRAEL, M.D.

PHILIP F. WILLIAMS, M.D., the son and great-grandson of physicians, was born at Martin's Ferry, Ohio, October 21, 1884. He was graduated from Lafayette College as well as from the School of Medicine at the University of Pennsylvania, which was his father's and his great-grandfather's *alma mater*. He was an intern for two years at Philadelphia General Hospital and the Hospital for Contagious Diseases, and was then a resident in obstetrics (house surgeon) at the New York Lying-In Hospital (1911–12). He returned to Philadelphia during the summer of 1912 and immediately opened an office to practice obstetrics.

From this time forward, Phil Williams had an unbroken teaching career at the University of Pennsylvania. Appointed in 1912 as an assistant in the maternity dispensary of the Hospital of the University of Pennsylvania and as a demonstrator in obstetrics at the School of Medicine, he was also then the pathologist to the Gynecean Hospital (later absorbed by the Hospital of the University of Pennsylvania). In addition, he initiated clinical attendance in several other hospitals that eventuated in chiefships of obstetrics at the Abington Memorial, Philadelphia General, and Jewish (now Einstein Medical Center) Hospitals. During World War I, he served in France with the unit of the Hospital of the University of Pennsylvania (Base Hospital #20) as the head of the Laboratory of Clinical Pathology and attained the rank of Major. Following the war, he was again most active in his own practice, as well as in teaching in both the School and the Graduate School of Medicine, University of Pennsylvania, in both of which he became professor and eventually professor emeritus. During all these years, he maintained a particular interest in the proper nutrition as well as in the medical care of the pregnant woman.

His professional associations were innumerable, but his major effort had to do with the elevation of obstetrics to a high art not only in his own city but also in the United States and—serving as a model—in the rest of the world. For the pathfinding activities of the Maternal Mortality Committee of the Philadelphia County Medical Society, of which he was the first chairman, Phil Williams was given the Strittmatter Award in 1933. This recognition seemed to refute—as far as Phil Williams was concerned—the aphorism of St. Matthew that a prophet is not without honor, save in his own country and in his own house. The citation of the Award referred to the epoch-making investigations of the Williams' Committee, thorough investigations of each maternal death in the City of Philadelphia. The first report of that Committee, an analysis of 717 deaths in the City of Philadelphia for 3 years—1931, 1932, and 1933—was printed in 1934 as a monograph. In this amazingly frank, thoroughly bold report, the Committee decried the dearth of obstetric residencies in Philadelphia, the lack of proper seminars for practicing obstetricians in this city, the failure of hospital departments of obstetrics to regulate the practice of their own staff members, and the urgent need to begin to care for the *whole* patient in the course of which social service workers would be of great importance. The final, urgent recommendation of that report was followed to the letter, for there continued

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monthly meetings of the Maternal Mortality Committee in which the obstetric deaths in all of the hospitals of Philadelphia were openly discussed. The work of this Committee and his shepherding of its major purposes, to say nothing of his constant presence at the monthly meetings, earned Phil Williams everlasting professional international stature.

The sessions of that Committee were educational in nature, and all interested physicians were invited to attend. A special invitation was issued to the physician who had been responsible for the care of the patient when her death occurred. The discussions, entailing comments by the city-wide representatives of hospital obstetric departments, were conducted in such a manner that anonymity of patient, doctor and hospital was preserved. The emphasis was placed on whether or not the maternal death had been avoidable and if so, what the preventable factors might have been. This teaching method to uplift clinical obstetrics was so successful that similar models were instituted in other cities of the United States. These many local committees contributed greatly to the decline of maternal mortality in the United States from a high of 67 maternal deaths during 1929 to the present rate of 2.7 per 10,000 live births.

In the heyday of his openly avowed battle to improve the care of pregnant women and to diminish both maternal and perinatal losses, Phil Williams was at first the sole voice and then, to his great satisfaction, one of the many bespeaking objectivity in the clinical analysis of obstetrics, the importance of maternal nutrition, the need to promote among pediatricians the value of proper association with obstetrics—a forerunner of our present day neonatal care—and the urgency to establish a national organization of obstetrics and gynecology that would involve—not a handful of professors—but the practitioners in the specialty. His were the words as president of the Federation of Obstetric-Gynecologic Societies in December, 1950, that proposed reorganization of that Federation into a more widely based Academy of Obstetrics and Gynecology, an Academy that reached fruition less than 12 months later. It was this organization that became within several years the present American College of Obstetricians and Gynecologists.

It would be fulsome to detail all the honors that came to Dr. Williams. One of the most intimate and pleasing to him was a dinner given in his honor by his Philadelphia colleagues in 1941. Among the most important presidencies and chairmanships he held were: Obstetrical Society of Philadelphia, 1927; Section on Obstetrics and Gynecology of the American Medical Association, 1944–46; Federation of Obstetric and Gynecologic Societies, 1950; American Gynecological Society, 1955. A special honor was bestowed when District III (Delaware, New Jersey, and Pennsylvania) of the American College of Obstetricians and Gynecologists named its annual resident's award the Philip F. Williams Prize Paper.

In addition to his major professional activities in Philadelphia, Phil Williams contributed chapters to seven viable textbooks, mostly dealing with the subject of nutrition and toxemia of pregnancy. However, his greatest literary love was his duty as the unofficial Book Review Editor of the *American Journal of Obstetrics and Gynecology* from 1912 to 1955, during the course of which that Journal published 500 of his book reviews. That this was one of his major interests is witnessed by his unique presidential address to the American Gynecological Society in 1955—it was a book review of all five editions of the first obstetric textbook published in the United States, Samuel Bard's *A Compendium of the Theory and Practice of Midwifery*. In spite of his innumerable professional responsibilities, Phil Williams managed to be a golfer of sorts during his early years. His real avocations, however, included stamp collecting (in which activity he was often a prize win-

ner) and photography which led him to possess an amazing collection of personally taken photographs of covered bridges from all around the world.

Mrs. Williams died in an automobile accident in 1940, when Dr. Williams was 56 years old. He did not remarry. He retired from practice in 1952 and lived in Villanova, Pennsylvania, with one of his two daughters, Mrs. Jay S. Riddle (the other daughter is Mrs. Phillip Allen, and there also remains a son, Jeremiah). During his retirement years in Villanova, he became an avid gardener and proudly exhibited his roses. In 1968, he moved from Villanova—together with the family of Mrs. Riddle—to Lake Forest, Illinois, where he died January 13, 1970.

It would be difficult to describe for those who never knew Philip F. Williams the innate modesty that embellished his humaneness. He was reluctant to discuss his own contributory role in the elevation of the practice of obstetrics. Genuinely interested in his younger colleagues, he was always a thoughtful, generous, immensely warm human being, one who was ever a delightful companion. Nor is it possible to impart an appreciation of his lighter side—for the reader of these words cannot hear and see the slightly expressed laughter which came mostly volubly from his ever twinkling eyes and the motion of his fabulously bushy eyebrows. Such recallings of these are nonetheless informative for the strangers to Dr. Williams. It is Manya Mannes who reminds us that "if you cut off your past, you diminish your future." Our lamented friend was a most significant part of our recent past.

I commend this brief memoir concerning Philip Francis Williams—or rather, Phil Williams, as he was affectionately known the world over—to your memory, where I hope that it will glow in a cherished corner, as brightly as it does in mine.

Transactions of the Philadelphia Neurological Society

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PROGRAMS 1969–70*

October 10, 1969

THE CEREBRAL CIRCULATION

Aspects of the Control of Cerebral Blood Flow in Normal and Pathologic Conditions. Martin Reivich, M.D.

The Effects of Drugs on Cerebral Blood Flow and Metabolism. Harry Wollman, M.D.

The Clinical and Research Application of Regional Cerebral Blood Flow Measurements. Lawrence C. McHenry, Jr., M.D.

Aspects of the Control of Cerebral Blood Flow in Normal and Pathologic Conditions

Martin Reivich, M.D.

The normal regulatory mechanisms that control cerebral circulation may break down in various pathological conditions. There is indirect evidence from animal and human studies indicating that local cerebral blood flow may be regulated by the metabolic activity of the region. This coupling of flow and metabolism can break down in a variety of acute brain disorders, most commonly in cerebrovascular disease. A relative regional hyperemia is often present in an area of infarction so that the blood flow and oxygen delivery are in excess of the metabolic requirements of the area. This results in a reduced extraction of oxygen from the blood and produces abnormally "red veins" which may be seen at operation. Angiographically, early filling veins may be seen in this area. Lassen in 1966 referred to this relative hyperemia as the "luxury perfusion" syndrome. The absolute regional blood flow does not necessarily have to be above normal for this condition to exist. A relative hyperemia would exist even with a normal or slightly reduced flow in a region whose metabolic rate is depressed, which is usually the case. It is thought that tissue acidosis is responsible for the deranged coupling of regional metabolic requirements and regional blood flow.

In ischemic regions of the brain, the normal circulatory response to carbon dioxide may no longer be present. Thus, a paradoxical reduction in cerebral blood flow may occur with hypercarbia. This is thought to be due to the fact that the vessels in the ischemic region are already dilated because of the presence of hypoxia, hypercarbia or tissue acidosis and, therefore, respond little to an increase in arterial P_{CO_2}. The vessels in the normal region respond by dilating and cause a drop in perfusion pressure through the leptomeningeal collateral circu-

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lation which diverts blood away from the ischemic area. This has been termed the intracerebral steal phenomena and has been demonstrated both in animals and man.

The inverse phenomenon has also been observed, i.e., an increase in regional cerebral blood flow in an ischemic region during hypocarbia. Presumably the normal vessels constrict in response to the hypocarbia while in the ischemic area the vessels are non-reactive. Thus the perfusion pressure in the ischemic region is increased with resulting increase in flow through the non-reactive vessels. In ischemic regions a failure of autoregulation in response to changes in perfusion pressure has also been demonstrated both in animal studies and in patients with middle cerebral artery occlusion. These derangements of normal cerebral circulatory regulation may occur in combination or independently of one another. Thus, Fieschi in 1968 has shown that in patients with acute strokes regional losses of CO_2 responsiveness may be present with intact autoregulation, or vice versa.

The Clinical and Research Applications of Regional Cerebral Blood Flow Measurements

Lawrence C. McHenry, Jr., m.d.

Regional cerebral blood flow measurements have been performed in over 150 patients admitted to the Neurological Service of the Philadelphia General Hospital. The studies were performed by the xenon-133 injection method of Lassen and Ingvar at the PGH Stroke Research Center. The method was evaluated by performing serial studies in 10 patients. The correlation coefficient for repeated studies in the same patient was 0.97 ($P < 0.001$). In order to obtain normal values for this laboratory, five persons with a normal neurological examination and a normal arteriogram were studied. The mean normal stochastic ($rCBF_{10}$) blood flow was 54.4 ± 2.7 cc/100 gm/minute. Thirty-nine percent of 28 patients with diffuse cerebrovascular disease, angiographically, had significant focal rCBF changes, whereas 22 of 23 patients (96%) with middle cerebral artery occlusion had a significant focal decreased rCBF over the middle cerebral artery territory. Eleven patients with diffuse cerebrovascular disease were given CO_2 by inhalation. Before CO_2, only 3 of these patients had focal rCBF abnormalities. After CO_2, 10 of the 11 cases showed definite focal flow changes which included: increases in flow, absence of any flow change, and, less frequently, a diminution in regional flow. Although others have considered the CO_2 test to be unreliable as a method of evaluating CBF in cerebral vascular disease, when regional cerebral blood flow is measured, focal changes in blood flow can be detected with the xenon injection rCBF method.

November 7, 1969

CASE PRESENTATIONS

The Bobble-head-doll Syndrome. Luis Schut, m.d.

Painless Cutaneous Ulcers with Special Reference to a Case of Tuberculoid Leprosy. Gary Kellett, m.d. and Gunter R. Haase, m.d.

Spinal Cord Meningiomas. Richard A. Davis, m.d. and Peter L. Washburn, m.d.

Neurological Disaster due to Fibromuscular Hyperplasia in a Young Adult Taking Oral Contraceptives. Stanley A. Rosenblatt, m.d., John D. Hartman, m.d. and Arnold A. Bank, m.d.

Painless Cutaneous Ulcers with Special Reference to a Case of Tuberculoid Leprosy

Gary Kellett, m.d. and Gunter R. Haase, m.d.

The pathogenesis and differential diagnosis of painless cutaneous ulcers was discussed. Lesions are particularly prone to occur on weight-bearing and chronically traumatized areas when neuropathy may be present in other areas as well.

A case of tuberculoid leprosy was presented and discussed. Of interest is the history of multiple diagnoses considered. Discussion of leprosy necessarily includes the other forms in which it may present. Treatment, including lay attitude, was emphasized. The necessity for accurate diagnosis of indolent ulcers was stressed, especially because response to treatment may depend entirely upon relieving the inflammatory reaction within the cutaneous sensory nerves.

Spinal Cord Meningiomas

Richard A. Davis, m.d. and Peter L. Washburn, m.d.

The spinal cord meningioma is a slowly evolving lesion which produces a potentially reversible neurological deficit when removal is prompt and complete. In a group of 41 patients, there was a definite sex preponderance, with 31 females. Fifty percent of all patients were in the fifth and sixth decades. Only two tumors were extradural and 50% were in the mid-thoracic region between T3 and T8. The initial symptom was either progressive weakness or paresthesias of the lower extremities, the duration of which was between six months and two years in the majority of patients. Sensory level with paraparesis or paraplegia was present in 90% of patients; there were four patients with a Brown-Sequard-like syndrome. The clinical diagnosis was supported by uniformly elevated cerebrospinal fluid protein and evidence of a myelographic obstruction. In contrast to spinal neurofibromas, meningiomas produced no bony changes of the vertebral column on X-ray examination. Although the motor deficit was severe at the time of operation, 30 patients made a complete recovery and were socially and economically independent.

Neurological Disaster Due to Diffuse Fibromuscular Hyperplasia in a Young Adult Taking Oral Contraceptives

Stanley A. Rosenblatt, m.d., John D. Hartman, m.d. and Arnold A. Bank, m.d.

A 29-year-old right-handed schizophrenic white female was admitted with a one-week history of right lower extremity weakness and inability to walk of one day's duration. She was alert but answered questions vaguely and frequently blocked responses. Examination revealed intact cranial nerves, right hemiparesis, brisk DTR's (more so on the right) and bilateral Babinski signs. Oral contraceptives (Orthonovum) had been taken for two years. Multiple laboratory studies were unremarkable except for slightly elevated sedimentation rate and platelet count and a diffusely slow EEG of moderate degree. Arteriography revealed bilateral carotid occlusions. All peripheral pulses became unobtainable 24 hours prior to death.

Autopsy revealed fibromuscular hyperplasia of cervical internal carotid arteries with bilateral occlusion. Involvement was part of generalized fibromuscular dysplasia involving multiple muscular arteries. Cerebral circulation had been compensated by adequate collaterals since there was no brain lesion of age comparable to the occlusive process. Hospitalization and death followed arterial thrombosis, presumably related to contraceptive medication, involving collateral circulation to brain. Occlusion of left external carotid artery by thrombus, showing early organization, was accompanied by subacute cerebral infarction. Occlusion of right subclavian and vertebral arteries by recently formed thrombus was associated with diffuse hypoxic changes and isoelectric EEG.

December 12, 1969

NEURO-OTOLOGY

Ménière's Disease. Robert J. Wolfson. m.d.

Electronystagmography. Martin Spector, m.d.

Otologic Diagnosis of Acoustic Tumors. Eugene Meyers, m.d.

Ménière's Disease

Robert J. Wolfson, m.d.

Ménière's disease is a distinct clinical and pathological entity which is responsible for the majority of cases of true vertigo. This disease is characterized by a triad of symptoms: vertigo, tinnitus, and deafness. Vertigo is usually the presenting complaint, although tinnitus and impaired hearing may have preceded this symptom by months or years.

A history of paroxysmal attacks of vertigo is characteristic of Ménière's disease. The frequency and duration of these episodes often follows no predictable pattern and the severity may vary widely with each attack. Nausea, vomiting, pallor and sweating frequently accompany the vertigo. Tinnitus is another characteristic symptom of Ménière's disease. Most frequently it is described as a low-pitched roaring or rumbling sound, much like the ocean surf. Hearing loss, the third characteristic symptom, is of the sensorineural type. Usually only one ear is involved; however, bilateral Ménière's disease is present in about 50% of the cases. As

the disease progresses, the hearing loss becomes more persistent and profound.

The treatment of Ménière's disease may be either medical or surgical. In the majority of cases, the disease is either self-limited or a suitable medical regimen can be instituted which will control or free the patient of his episodic dizziness. Many patients do not respond to medical treatment and, therefore, require some form of inner ear surgery to relieve them of their symptoms.

When surgery is considered there is a choice of two basic types of operation on the inner ear. Each type of surgery is designated to eliminate the recurrent vertigo but differs primarily in its attempt to preserve the hearing in the pathological ear. The first type is a destructive type labyrinthectomy in which no attempt is made to preserve the hearing. The second type is the selective procedure whose objective is to eliminate the function of the balance portion in the inner ear but to preserve the hearing. Each of these procedures has advantages and disadvantages. The results and indications for each type of procedure were discussed.

Electronystagmography

MARTIN SPECTOR, M.D.

Electronystagmography is the electrical recording of nystagmus. Nystagmus is recorded and measured by following the changes in the corneo-retinal electrical potential as the potential varies with movements of the eyes. With eyes closed, up to 10 times as much nystagmus is found as with eyes open, due to the inhibition by light and fixation on nystagmus. Furthermore, the speed of the slow component can be measured. The speed of the slow component is a more accurate measure of labyrinth function. For instance, on caloric tests, measure of the speed of the slow component will reveal pathology twice as often as merely measuring duration.

Electronystagmography is useful in otology, neurology and ophthalmology. The neurologists, Jung and Kornhuber, in Freiburg, Germany, have routinely used electronystagmography since the 1930's to study pathology in the posterior fossa. The technique of electronystagmography was described as well as equipment useful in a clinical environment. Illustrative slides and case histories were shown.

FEBRUARY 6, 1970

DRUG ABUSE AND MISUSE

Changing Patterns of Drug Abuse (Other Than Alcohol) in the USA and Their Medical Complications. ABRAHAM WIKLER, M.D.

A Physician Faces Drug Abuse: A Re-examination of Basic Assumptions. DONALD J. OTTENBERG, M.D.

Changing Patterns of Drug Abuse (Other than Alcohol) in the USA and Their Medical Complications

ABRAHAM WIKLER, M.D.

The past century has witnessed a steady, and recently accelerating, increase in the number and variety of available drugs and of people who abuse them. During the 50-year period before the Harrison Narcotic Act (1914), opium smoking was practised largely by some Chinese and some American "sports" (psychopaths), while oral (laudanum, paregoric) and hypodermic preparations (morphine and, later, heroin) came to be abused by persons with chronic, painful illnesses. In subsequent decades, "medical addiction" to opioids came to be overshadowed by misuse of such drugs (morphine, heroin, hydromorphone, etc., s.c. and i.v.) for "pleasure," particularly among metropolitan slum dwellers, originally white but now predominantly black or Puerto Rican. Physicians and nurses have continued to be a high risk group, with predilection for synthetic opioids (e.g., meperidine). As in the case of alcohol, abuse of sedative drugs (predominantly "short-acting") has not been restricted to any particular social class. In addition to the older barbiturates, the list now includes "non-barbiturate sedatives," (e.g., glutethimide) and "minor tranquilizers" (e.g., meprobamate). Use of amphetamines for their sleep-suppressing and appetite-reducing actions has led to abuse with frequent production of psychotic reactions, often indistinguishable from paranoid schizophrenia. More recently, i.v. injection of methamphetamine ("speed") has been attended by aggressive behavior as well as psychotic reactions. Abuse of hallucinogens (LSD, mescaline, psilocybin, etc.), especially by youthful persons, has been fostered by the rise of "psychedelic" cults, in the lore of which psychotic reactions become

"transcendental experiences," etc. Similarly, the thought-sequence disrupting and hallucinogenic effects of marijuana (directly related to the tetrahydrocannabinol content of the preparation used) have been transformed into "consciousness-expansion" by cultist semantic distortion, and abuse of this drug has become part of the "turn-on, tune-in and drop-out" *modus vivendi* of a segment of our youthful population in search of "new experiences" and "instant gratification." The medical complications arising from abuse of this great variety of drugs were discussed and the need for control of such drugs at their source emphasized. In addition, it was stressed that for education to have any effect, it must be directed toward exposure of cultist nonsense.

March 6, 1970

NEUROLOGICAL SEQUELAE IN LOW BIRTH WEIGHT INFANTS

Neuromaturation in Low Birth Weight Infants. Leonard Graziani, M.D.

The Neurologic Spectrum of the Congenital Rubella Syndrome. Peter Berman, M.D.

Sequelae of Jaundice in the Newborn Period. Lois Johnson, M.D.

Neuromaturation in Low Birth Weight Infants

Leonard Graziani, M.D.

The maturation of the nervous system of two groups of infants of low birth weight was estimated by the results of a standardized clinical neurologic examination and by evaluation of the electroencephalographic responses to auditory stimuli (clicks). Algebraically summed responses to clicks were recorded simultaneously from 10 scalp electrodes, using a standard electroencephalograph, tape recorder, and a computer of average transients. The results obtained by the two methods were compared with the age postconception, estimated from the maternal history. One group consisted of infants whose birth weights were below the 10th percentile for their gestational age (37.1 ± 2.0 weeks); the other group consisted of infants whose birth weights were similar to the first group but were between the 25th and 75th percentile for their gestational age (31.0 ± 2.3 weeks).

In the small-for-age infants, the electroencephalographic responses and the neurologic reflexes were more mature than in the infants of similar birth weights who were not small-for-age. The results of both examination methods correlated well with the estimated postconception age but less well with birth weight, postnatal age or somatic growth.

The Neurologic Spectrum of the Congenital Rubella Syndrome

Peter H. Berman, M.D.

One hundred and eighty-seven infants, in whom virus isolation and/or persistent antibody levels determined the presence of congenital rubella infection, were examined neurologically between 12 and 30 months of age. Rubella retinopathy was the most frequent abnormality, occurring in 141 (83%) of the 170 infants in whom the fundi could be visualized. A significant hearing loss was present in 139 infants (76%). The hearing deficit was mild in 11, moderate in 39 and severe in 82. Ninety infants (48%) were retarded in psychomotor development. The retardation was mild in 28, moderate in 28 and severe in another 28. Eighteen infants had associated signs of motor dysfunction (spastic diplegia 15, generalized hypotonia 1 and ataxia 1). Only 2 infants had a history of convulsions. In both, the seizures were brief, generalized and associated with the onset of febrile illnesses. Cardiac defects were present in 66 infants (36%). Pulmonary artery branch stenosis was the most common cardiac anomaly. Forty-eight infants (26%) had cataracts. In 22 of these the cataracts were present bilaterally.

In every instance in which a history suggesting maternal infection of rubella virus could be obtained, the infection occurred prior to the onset of the 18th week of gestation. Cataracts and heart defects were much more common in infants whose mothers had had rubella during the first 8 weeks of pregnancy, but there was no correlation between the time of maternal infection and the incidence or degree of hearing loss, psychomotor retardation, or retinopathy. Infants with bilateral cataracts were almost always severely retarded in psychomotor development.

Sequelae of Jaundice in the Newborn Period

Lois Johnson, M.D.

The occurrence of minor cerebral deficit in the absence of detectable neurologic deficit as a

result of neonatal hyperbilirubinemia has been suspected for some time. In 68 sibling pairs, Day and Haines found a significantly lower I.Q. ($p = <.001$) among children who had been jaundiced in infancy when each child was compared to an older sibling who had not been jaundiced. (Ped. *13:* 333, 1954) Recently, Odell (J. Ped. *76:* 12, 1970) has documented the presence of minor brain damage in the absence of abnormal neurologic signs by means of psychometric and neurologic evaluations at age 5 to 6 years in a group of children who had had neonatal jaundice severe enough, in most cases, to be treated with exchange transfusion. Damage was found to correlate ($p = <.01$) with degree of saturation of the serum proteins with bilirubin (as measured by salicylate saturation index.)

In cooperation with the Department of Rehabilitation of Children's Hospital of Philadelphia, we are confirming these results in a similar study using the HABA binding technique. Analysis of the first group of children being recalled at age 4 years for detailed psychometric, speech and hearing and neurologic examinations suggests that jaundiced infants whose HABA binding levels fall below 50 to 55% are likely to suffer some degree of measurable damage, while infants whose binding levels remain above this level will escape (chi square = 6.04, $p = 0.014$, $n = 41$). Correlation of damage with bilirubin/albumin molar ratio was good. As in the study of Odell, correlation with serum bilirubin concentration was poor.

An increasing body of data clearly indicates that if minimal as well as major cerebral damage as a consequence of neonatal jaundice is to be prevented, more exchange transfusions will have to be done or some alternative or additional form of therapy will have to be used. Phototherapy in conjunction with exchange transfusion gives promise of offering increased protection without undue therapeutic risk. Its ability to do so will have to be subjected to the scrutiny of long-term follow-up studies.

May 15, 1970

Joint Meeting of Philadelphia Neurological Society and the Section of Neurology and Neurological Surgery of the Medical Society of the District of Columbia, held in Washington, D.C.

CRISIS IN MYASTHENIA

Crisis in Myasthenia. Raymond Jenkins, M.D.

Thermography: Use in Diagnosis of Extracranial Carotid Artery Disease. Margaret Abernathy, M.D.

Prognostic Criteria for CSF Shunting from RISA Cisternography in Communicating Hydrocephalus. David McCullough, M.D.

Diastematomyelia in the Adult. O. Hugh Fulcher, M.D.

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First Woman Fellow of The College of Physicians of Philadelphia: Memoir of Catharine Macfarlane 1877-1969[1]

By KATHARINE R. STURGIS, M.D.

On May 27, 1969, at age 92, Catharine Macfarlane's indomitable spirit slipped away. One cannot use, in connection with Kitty Mac's personality, the usual expression, "came to rest," because this first woman member of our College was so bold and colorful that it is impossible to conceive of her dauntless spirit as passive.

Shortly before her death in the Hospital of the Woman's Medical College, to which she gave her greatest devotion, Kitty Mac mentioned to me that she had written her autobiography but had not succeeded in finding a publisher. "You probably didn't let your fire and personality shine through," I said. "Will you see what you can do with it?" she asked. She must have felt the imminence of death since, the very next day her faithful chauffeur, William, arrived at my home with what turned out to be a diary, not an autobiography. I have drawn heavily on this material for this memoir and present to the College the box of typewritten sheets as they were given to me to be available and safe in our archives.

Catharine Macfarlane was born in Chestnut Hill on April 7, 1877, to Henrietta Ottinger Huston and John James Macfarlane. A fifth generation American, she prided herself that her Scottish-Irish, German, and English ancestors were among Pennsylvania's early settlers.

An only child, her parents' expectations for her were very high. She wrote, "Since my mother had been a teacher and my father a school principal,[2] I was expected to make good marks." This is probably the key to Kitty Mac's own impatience with mediocrity. She worked to reach the top in everything she did. This, plus her devotion to her mother—who lived to age 101—left little time for social activities.

Catharine attended Friends Central School and spent a year at a girls' school in Leipzig. At first she contemplated teaching history, but her mother's suggestion of a career in medicine appealed to her. "My

[1] Read before The College of Physicians of Philadelphia, 4 November 1970. Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

[2] The Joseph C. Gilbert Public School in Chestnut Hill.

idea of a doctor's life was having a horse and carriage and driving over the country roads . . . I should meet all kinds of people . . . I should be able to make them well."

Kitty Mac was only 16 when she returned from Germany determined to study medicine. Clara Marshall, Dean of Woman's Medical College, recommended two years of study at the School of Biology at the University of Pennsylvania after which Catharine was admitted to Woman's Medical College with advanced standing, so she spent only three years working for her M.D. Her Professor of Gynecology was Hannah T. Croasdale, described by Kitty Mac as "a Quaker lady and *trés grande dame* . . . who had not acquired much enthusiasm for aseptic procedures. A tiny lace-bordered handkerchief was tucked in an upper pocket of Doctor Croasdale's operating gown. With this, she would occasionally dab her nose, then proceed with the operation. Her touch was so delicate and her handling of tissues so sure that primary union was the rule in spite of such errors."

When Kitty Mac was graduated from medical school, only two Philadelphia hospitals admitted women to rotating internships—Blockley and Woman's Hospital. Doctor Macfarlane chose the latter, interning there in 1898 during the Spanish-American War. A restrictive gift of $125,000 from Anna Jeanes had prevented male patients from being admitted to Woman's Hospital but, fortunately, Anna Jeanes was still alive and consented to exceptions being made for soldiers. During Doctor Macfarlane's internship, 64 soldiers with typhoid fever and some with malaria and other diseases were admitted.

Of the obstetrical service, Doctor Macfarlane wrote: "The baby's head was delivered under a continuous stream of carbolic acid solution. If the delivery took long, the interne's fingers were numb and partly paralyzed before the baby arrived."

After her internship, Doctor Macfarlane supervised Woman's Medical College students in their obstetrical out-patient service at 335 Washington Avenue, a building without screens. She was one of three on service there who developed typhoid fever. One of the three died. Kitty Mac was terrified of the cold tub baths every three hours when fever rose to 103°. She felt she'd develop pneumonia were she plunged into cold water—so she pushed her bedclothes off, asked for a fresh icecap, and held her mouth open for a while before the nurse appeared with the thermometer. This was early evidence of her ingenuity and determination.

Doctor Macfarlane opened her office in Germantown. She called on some of the neighborhood physicians—William Norton Downs, William Rush Dunton, and Alexis DuPont Smith. Doctor Smith had just lost a patient from childbirth fever, so he asked young Doctor Macfarlane what she thought had caused it. "Doctor Broomall says the infection is carried in on the doctor's hands." "What do you think?," Doctor Smith asked. She replied in a low voice, "I think so, too." Doctor Smith sent her many patients and she delivered his own daughter.

At first Kitty Mac made house calls on a bicycle with her black bag strapped to the handlebar. Finally, she achieved her ambition—a horse and buggy.

Catharine Macfarlane was the first woman to operate at Germantown Hospital. The procedure was a hysterectomy. Doctor Purnell assisted her and Doctor Alexis Smith "chaperoned" her. All went well. During this period of early practice, Doctor Macfarlane studied urology two days a week at Johns Hopkins under Guy Hunner. Kitty Mac diagnosed two cases of Hunner ulcer in her practice. Doctor Hunner came up and excised the first through a suprapubic cystostomy at Woman's Hospital. The second patient was operated on by Doctor Macfarlane under Doctor Hunner's guidance. These were the first two cases of Hunner ulcer recognized in Philadelphia.

In 1914, Doctors Macfarlane, Caroline

Purnell, and Marie Formad were proposed for membership in the American College of Surgeons which had been founded only the year before.

On her return from studying obstetrics in Berlin under Dr. Ernest Bumm, she brought a Detroit electric automobile which had a cruising range of only 60 miles. If the battery ran down between the only two recharging points—20th and Market Streets or the Germantown Philadelphia Electric plant—Kitty Mac had to abandon the car and proceed by trolley. Her feelings were hurt one day when an irate man in a Ford shouted in passing, "Take your damned baby coach up on the sidewalk where it belongs"—so she bought a Ford.

During World War I, Doctor Macfarlane did the work of five Germantown doctors as well as her own. She felt it a "proud and memorable day" when her mother and she accompanied her father to the polls in 1920. Despite all the assistance she received from her male colleagues, the thread of feminism ran strong in her.

In 1922 Doctor Macfarlane succeeded Ella B. Everett as Professor of Gynecology at Woman's Medical College. She appointed Margaret Castex Sturgis and Faith Skinner Fetterman as associates. Without formal pedagogical training, she was an excellent teacher—simplifying and dramatizing her presentations and posing questions to rouse inattentive students. She used every possible audiovisual aid long before that term came into being.

In 1928 Doctor Macfarlane resigned as Chief of Gynecology at Woman's Hospital to devote herself to building up her department at Woman's Medical College in its new location on Henry Avenue. She suddenly realized that she had risen to become a court of last appeal. This was a sobering thought to her.

Doctor Macfarlane visited Marie Curie in Paris in 1930, fulfilling one of her life's ambitions. Two years later, Kitty Mac went to Stockholm to visit the Radium Hemmet and other medical centers where radium therapy was in use. She felt better able to cope with carcinoma of the uterus after that.

Catharine Macfarlane joined many professional societies. Among these were the American Medical Women's Association, of which she was president in 1936, and the Medical Women's International Association. While she was attending the triennial meeting of the latter society in 1937 in Scotland, she made the statement that periodic pelvic examination of presumably well, asymptomatic women should be the way to find early, curable pelvic cancer. Dr. Louisa Martindale, president of the Congress, said, "Doctor Macfarlane may be right but I'm sure British women would be unwilling to be examined by a doctor until they had symptoms!" This so irked Kitty Mac that, on her return, she set up her famous periodic pelvic examination program to prove that American women had the intelligence to participate in a preventive program. Dr. Ludwig Hektoen, Chairman of the AMA Committee on Clinical Research, recommended a grant be awarded to Doctor Macfarlane and suggested a population of 1,000 women for the study. With Doctors Sturgis and Fetterman, Doctor Macfarlane enlisted 1,319 women and launched the study for which she later received the Lasker Award.

Doctor Macfarlane was interim Dean of her alma mater between Martha Tracy's retirement in 1940 and Margaret Craighill's appointment in 1941. She retired from the chairmanship of the Department of Gynecology in 1942 at age 65 with the title of Research Professor of Gynecology and recommended Margaret Sturgis as her successor because she was qualified and "must be tired of her role as Prince of Wales."

Doctor Macfarlane was elected Alumnae Representative to the Board of Corporators of Woman's Medical College in 1943, a post she held until her death.

After World War II, when Dean Craighill returned from her military duties to

Woman's Medical College, Doctor Macfarlane learned of the plan to turn Woman's Medical College over to Jefferson Medical College with thirty Woman's Medical College students entering each of the four classes, but without provision for Woman's Medical College faculty. In characteristic fashion, Doctor Macfarlane mobilized the Alumnae and held a protest meeting in Thomson Hall of The College of Physicians of Philadelphia on April 10, 1946. She wrote, "By the grace of God, who seems to have Woman's Medical College under His very special care, the majority of the Board were opposed to the merger."

Active from the early days of Philadelphia Division of the American Cancer Society, Kitty Mac became president of its Board of Directors in 1943. About the same time she succeeded Doctor Pfahler as Chairman of the Cancer Control Committee of the Philadelphia County Medical Society. Later she was a member of the Cancer Commission of the Pennsylvania Medical Society and a Board member of the Institute for Cancer Research.

Among the highlights of Doctor Macfarlane's life were her admission to this College in 1932 as its first woman member, the Gimbel Award in 1941, the presidency of the Obstetrical Society of Philadelphia in 1943, the Strittmatter Award of the Philadelphia County Medical Society and the Elizabeth Blackwell Award of the American Medical Women's Association in 1948, and honorary degrees in 1948 from Ursinus College (D.Sc.), in 1950 from Woman's Medical College (D.Sc.), and in 1956 from Drexel Institute (D.Med.Sc.). She became a Distinguished Daughter of Pennsylvania in 1949 and received the Lasker Award of the American Public Health Association jointly with Elise L'Esperance in 1951.

Catharine Macfarlane had a keen mind, a tremendous sense of duty, a delightful sense of humor, and a superb self-confidence. She had a rich professional life and her relationship to her parents was very close. Whether or not she missed fulfillment in her personal life was not apparent for, as dearly as she was loved, she never encouraged personal confidences. Over her lifetime, she illustrated the seeking of the pioneer woman for professional opportunity and the attainment of respect, honor and recognition. At age 41, when I first met her as a youngster of 15 who wanted to study medicine, Kitty Mac wore men's shirts, spare skirts of men's wool, and flat-heeled shoes. Years before she died, she had shifted to feminine clothes and wore with grace corsages sent her by adoring patients for all sorts of occasions.

This was a splendid woman, a capable surgeon, an excellent educator, a prophetic choice for the first woman Fellow of this College. We pay her this last tribute with deep affection!

Ancient Korean Medicine[1]

By LAWRENCE CHARLES PARISH, A.B., M.D.,[2]
AND SHEILA GAIL PARISH, A.B.[3]

Korea, "the Land of the Morning Calm," ; a peninsula bordered by China and ounded by the Yellow and East Seas. In ncient times, the Orient was strongly influ- nced by China; Korea was no exception. s early as 140 B.C., the Koreans began to ade with the Chinese, and this exchange ffected every aspect of Korean culture. Al- hough the Koreans had developed their wn system of medical treatment, complete ith witches and demons, it, too, was hanged by the introduction of the more rganized Chinese precepts. Such practices s acupuncture, massage, and moxa were to ecome an integral part of Korean medical ractice.

Earliest Korean Medicine

Initially, the Koreans worshipped a sun od and believed themselves to be a "cho- en people," much as the Hebrews. Astrol- gy, an integral part of the religion, was lso employed in the hope of preventing pidemics, which periodically scourged the eninsula. Their religious services placed onsiderable emphasis upon the ritual of leanliness. This obsession with purity of ody and spirit manifested itself in the earing of a white jacket, called a chogerie. nother aspect of the ritual was dietary re- riction; dietary laws encouraged them to hoose fish and to avoid such greasy meats s beef or pork.

Gradually, the religion evolved into Shamanism, called Sinkyo in Korea. This worship, widespread throughout the Orient, was based upon the belief that both man and lower animals have body and soul. Although the individual could change the spirit, who controlled his health and fortune, the shaman had much greater control. Frequently, the shaman was a woman, known as a mutang, who would learn special rites, performed over a sacrificial altar.

Most diseases were thought to have deities who directed them. The god of smallpox, called mama sonnim, was treated very kindly, for fear of inciting his wrath. When an epidemic seemed imminent, the people of the village would bathe their heads in running water, pouring it from new vases. If they were fortunate enough to have sea water, this would please the god even more. At the same time, the people set a table full of fruit, placing it under the vestibule or next to the door; no house in the village was neglected. Should the god still be angry and storm the village, a small flag would be flown by the afflicted house or else the front door would be smeared with clay. All this prevented strangers from visiting and furthering his anger.

The Han Period

(206 B.C.–24 A.D.)

Beginning about 206 B.C., word had spread to China of the wonders of Korean herbs. Over the next hundred years, trade routes would be established which would bring both cultures into closer contact and eventually lead to Chinese control over the northern Korean provinces of Nangnag and Hyundo. Shin-yu, a Chinese medical scholar, was very much impressed with a

[1] Section on Medical History, The College of hysicians of Philadelphia, 3 November 1970.

[2] Visiting Professor of Dermatology, Yonsei Uni- ersity School of Medicine, Seoul, Korea; Associate, epartment of Dermatology, University of Pennsyl- ania School of Medicine, Philadelphia, Pennsyl- ania 19104.

[3] Formerly instructor, United States Education enter, Ascom, Korea; Instructor in History, Public chool System, Philadelphia, Pennsylvania.

particular Korean root. In his textbook, entitled *Chi Chiu Chang*, he described the magical wonders of "shing," called "ginseng." This herb altered the course of Korean history.

"Gin," or "jen" in Chinese, means man. Because the root resembles the lower part of the human body, it is considered more efficacious in traditional medicine. *Panax ginseng* is comprised of several chemical components, including panaquilon, gensenin, saponin, panaxin, panax saure, and panacen. The ginseng plant has three branches, five leaves, and a stem growing straight upwards.

A well known story is told about ginseng. According to Korean folklore, a childless woman had not had her prayers answered for children. One night, the god of the mountain appeared to her and told her to visit a certain place on the mountain. The next morning, she followed his instructions and found a strange plant with ripe fruit. She took the seeds home and carefully planted them. For six winters and summers, she cultivated them. At long last she bore her first child, and at the same time she harvested the first crop of ginseng, "the elixir of life."

In Korean medicine, ginseng was regarded as a panacea for almost all diseases, as mandrake was held by the Hebrews. When the Chinese took the drug into their formulary, they were much more selective in their indications. Such conditions as dysentery, gastric carcinoma, epilepsy, influenza, and even menorrhagia could be treated. In all, ginseng was recommended in 40% of the 2,200 medicines listed in a pharmacopeia.[4] The Chinese also advised against the use of the root in impotency due to dissipation or debauchery.

Gradually, the Chinese influenced Korean medical practice, bringing in new drugs and recommending different uses for the existing herb preparations. The *Kyun Ak Chun Saw*, a medical treatise publishe between 59 and 76 A.D., and the *Wee Ha Eep Moon*, written about the same tim reflect these changes.

The Three Kingdoms

(57 B.C.–935 A.D.)

Religious Influence

During the era of the separate states c Koguryo, Paekche, and Silla, the greates changes occurred in Korean medicine. Pe haps, the most significant factors were th introduction of three new religions in th peninsula. Shamanism was never com pletely replaced, and remnants still exi today. Between 56 B.C. and 668 A.D., Con fucianism made inroads; Buddhism foun its first converts in 372, and Taoism ap peared. Unlike Western religions, none mutually exclusive of the other, and th people were able to select elements fro each. Such was also the case in medicine.

Confucianism brought the concept c balances. The Yin and Yang of Chines medicine became Um and Yang in Korea Life is controlled by the two opposin forces. Bringing them into harmony create a healthy state, but having them imbalance results in disease. Either Um or Yang ca be too strong or too weak. A healer, follow ing the Confucian tenets, can restore th balance and then good health.

When the Buddhist priests arrived i Korea, they brought with them ideas fro both Indian and Chinese medicine. A though they taught that freedom from di ease comes only from belief in Buddh they also introduced Greek medical though through the Hindu system. For the fir time, the Koreans were considering th pathologic doctrine of four major disorder This appeared in such Buddhist scripture as Yong Soo's *Daeji Takron* and Enjaeng *Namphae Kigwinae Bupjon*, and it is sai to have come from the theory of Emped

[4] According to Chang Chieh-pin in his *Ching Yo Chuan Chu*.

es of Akragas (500–430 B.C.), who beeved the body was made up of four eleıents: warm, hot, dry, and cold. A diseased ate occurs when these elements are not in armony. Some of Hippocrates' ideas also eached Korea, i.e., theory that natural facors cause disease displaced the concept that irits are empowered to bring disease.

The role of Taoism is more vague. Their llowers were the alchemists of the times. hey were in search of the Golden Pill, hich would become the elixir of life. The aoists also believed that charms and prays could ward off illness.

Han Yak

Throughout the period of the three kingoms, many Chinese methods were incorpoated into the traditional system of Korean edicine. Although the Han Yak system is ell over four thousand years old, it was odified by many Chinese innovations and xists today with only a few changes.

Han Yak practitioners believe in a natual cause for disease; however, they pay no ttention to the etiology. Preventive medine and follow-up care are also ignored. he sole emphasis is placed upon treating e symptoms through restoring the balance etween the two forces. Yang represents the ale or aggressive force, while Um is the male or the receptive force.

Anatomy: This subject seems never to ave been scientifically investigated. Dissecon was apparently forbidden, and most of e anatomical facts appear to be a compiation of fancy. Two great vessels run the urse of the body. The female line, from hich the Um pulse is obtained, extends om the lower lip to the pubic arch. The ale line begins at the upper lip, extends ver the scalp, and continues down the ack.

This line contains the Yang pulse. There re twelve great nerves carrying impulses om 360 surfaces of the body to various rgans. Among these, the index finger nerve reflects the large bowel, while the middle finger nerve indicates the spleen. Sexual organs are connected to the ring finger nerve. There are two nerves on the large toes, a dorsal nerve connected to the liver and a medial nerve related to blood. The nerve from the second toe is linked to the stomach, while that from the third toe sends impulses to the great toe. The nerve of the fourth toe and the gall bladder are associated, and that of the little toe and the urinary bladder are connected. The kidneys are controlled by a spot on the instep of the arch.

Examination: Consultation with the patient is all important and is comprised of four sections. Maeng is observation of the face and the general appearance of the body. Moon involves listening to the sounds of the patient's voice. Moo means inquiring about symptoms and other aspects of the history. Lastly, Chul is concerned with palpating the pulse and the stomach. All parts must be completed before treatment can begin.

Diagnosis: There are three areas in which disease can be found: the hollow organs, the surface of the body, and the areas between the two. The elements of the body, which are the same as the elements on earth, work in a complete cycle to support each other's functions. The heart is equated to fire, blood to earth, kidney to water, lung to metal, and liver to wood. Each element has influence over another particular element. The heart restores the blood, which helps the lung, that supports the kidney, which reacts with the liver, that works on the heart.

Various states of the tongue are also significant. Of the eight types that are recognized, a white tongue means too much moisture and a fever must be induced to cure the patient. When the tongue is yellow and dry, this is an indication for evacuants, but if the tongue remains moist, stimulants are needed. A red tongue points to an in-

crease in body fluids, while a shortened tongue suggests a dim outlook. If the tongue is coated black, stimulants are usually needed, although evacuants may be used.

Treatment: This is based upon the supposition that the disease needs to be moved from its location. If the Han Yak practitioner cannot force the disease to the surface, he may try to drive it into a hollow organ, from which it can be then expelled. The physician pays constant attention to his patient, who is obligated to try each suggested method until he is cured. The physician soon gets a reputation for successfully treating a certain type of ailment, and patients will seek him out whenever their symptoms suggest that ailment.

1. Acupuncture: Called ch'im in Korean, it is one of the most important methods available. Acupuncture is based upon the supposition that stagnated blood will not flow properly through its normal channels. The basic textbook has been *Whang Chai Yung Choo Kyung*, written in China during the Whang-Chai dynasty (2697–2597 B.C.).

The method involves piercing the skin with sharp silver needles, ranging in length from 3 to 6 inches. After entering the skin, the needles are turned to the left or right to strengthen or weaken Um or Yang.

Many different procedures are used in acupuncture, including horse itch, water root, return, welcome, three li, three focus and white ring. Two of the most interesting procedures are heaven pot and big barn. In the former, the doctor cauterizes one inch after the poo-tol and four-tenths of an inch deep. This is done three times for the dumps, sore throat, or hard breathing. In the latter, the physician cauterizes 15/100 of an inch deep, three times between the shoulder and the neck for treating septicemia and assorted aches and pains of the shoulder, arm, and back.

An important treatise that appeared in 420 A.D. was written by Wang You Il. Entitled *Tong Een Kyung*, it is translated to mean *The Copper Man*. To illustrate h theory, Wang modeled a man of copper an constructed a chart to diagram the ana omy. The internal parts of the body a blood vessels, nerves and channels. The la part includes the spleen and stomach, live lung, pericardium and gall bladder. Th body is divided into anatomical sections, co sisting of a., regional-thorax and abdome b., visceral-liver, gastro-intestinal tract, ki neys, and c., surgical-blood vessels, nerve and channels. The author later describe 160 operations and their indications. Eve today, Han Yak practitioners continue t follow Wang's teachings, despite severa books written since then.

2. Moxa: This method of therapy, know as jim in Korea, uses heat. Several types o jim are recognized, depending upon th way the heat is applied to the body. Pillo jim is made of heating a wooden for which resembles a pillow, and then appl ing it to the body. Sook jim, made fro artenosia, comes in two forms: the poultic and the fireball. The former is made b boiling leaves and stalks and then placin them in a cloth. After the water is wrun out, the poultice is applied to the affecte part. A fireball is made by crushing a stal and rolling it into a small circle. Befor being placed on the afflicted area, it is se on fire. Each type of jim is designed t cause sweating, which will bring the diseas to the surface, where it will be exposed.

3. Medicine: The wide variety of potion and remedies was based in part on the *Po Cho,* meaning the first manuscript, whic was written between 2648 and 2383 B.C The ingredients came from mountain gras hemp, barley, rice, millet, cucumbers, an melons. Bamboo, fragrant wood, and misel toe were also found to have medicinal va ues, as did worms, shell fish, and even fow The most important drug of all was gin seng.

One of the most curious remedies was mixture of scorpions. These had to be im ported from China, because the Korea

ıpply was soon exhausted. Only those scor-
ions growing within the palace enclosures
ere thought worthy. When prepared, the
ısect was washed thoroughly and roasted.
: has a tranquilizing effect, tastes both bit-
:r and sweet, and is indicated in the treat-
ıent of paralysis and juvenile convulsions.

Influence on Japanese Medicine

As early as 414 A.D., a Japanese king re-
uested that Shilla send him a physician.
.im Mu answered the call and became a
ioneer of Japanese medicine. Shortly
ıereafter in 456 A.D., a Kokuryo physician
'as sent for by the Japanese. Duklae re-
ıained in Nampa (Osaka), and his descend-
ıts were known as the Nampa Doctors.
or the next two hundred years, Korean
ıedicine had a strong influence upon the
ıpanese. Many Buddhist priests went to
ıpan and served as healers; however, on a
:w occasions, they brought with them epi-
emics, probably measles. In all, several
ther physicians emigrated to Japan and
ıught them about Han Yak. They brought
ith them several books which survive to
ıe present. These include: *Shilla Bup Sa*
ang (Shilla Priests' Prescriptions) and
hilla Bup Sa, Syu Kwan Bimil Bang
Shilla Priest, Lyu-Kwan's Secret Therapeu-
cs).

Medical Education

Very little is known about this, although
ı the Unified Silla Kingdom in 692, a medi-
al institution was established to teach med-
cine in the Tang style. Two doctors, con-
dered scholars, accepted pupils and used
bout seven textbooks, including *Chim*
yong on acupuncture and *Maek Kyong* on
ulses. Anatomical investigations were
tarted, so that they might learn more
bout the position for palpating the pulse
nd locating the proper site for acupunc-
ure and moxa.

KORYO DYNASTY (918–1392)

This medieval age of Korean history,
uring which the country was first called Korea, is highlighted by the overwhelming influence of Buddhism and its priests, a continuing expansion of trade that brought the country into contact with the Moslem world, and the Mongol invasion which plundered and robbed the peninsula but also spread general medical knowledge to the people.

The Koryo kings were devout worshippers of Buddha. The priests were given so many important positions that many believed they were truly in control of the country. To illustrate how a priest might gain power, in 1182 a religious leader appeared before the king and announced that he was able to cure any disease. "If anyone drinks water in which I have washed my hands, he will be immediately cured. After drinking the water, pray earnestly to Buddha. Then rise and say: 'I am cured,' and if you really believe you are cured you will be so."

The pharmacopoeia was slightly enlarged by the addition of several herbs, mentioned in the Buddhist scripture, *Bulkyo Daejangkyung*, written about 1214. These Indian herbs very much resembled some mentioned by the Greeks, suggesting a miniscule amount of Western influence.

At the end of the ninth century, the Moslem Empire extended from the Indian borders to the strait of Gibraltar. On at least three occasions, in 1025, 1026, and 1041, Moslem merchants reached the Korean shores and traded such remedies as were made from rhinoceros horns, santalum album, and aquilaria agallocha for Korean herbs. Ginseng became in demand throughout the Saracenic lands.

The Mongol Empire laid its powerful grasp over Korea from 1259 to 1356. Ghengis Khan's armies had already reached into Europe, and they had been introduced to some of the ways of Western medicine. One of the most interesting Mongol contributions to Korean medicine was the distillation of fruits into wine.

The Koryo government made some effort

in the field of public health with the establishment of two posts: the Taeuigam (Great Medical Supervisor) for the important court officials and the Hemingruk (Public Charity) for the poor commoners. The royal family had their own bureaus: Sangyakkuk (Medical Bureau) and Sansikkuk (Food Bureau).

A state examination was begun in 980 for licensing medical practitioners. Shortly before, anatomical studies had been fostered, with some emphasis placed upon osteology for the acupuncturist. At Pyongyang, called Sogyong or the West Capital, a medical school was established in 982. These teachers in turn taught one physician from each of the 12 moks or areas who would then instruct the local practitioners. Although the teachings were in both Confucian medicine and Han Yak, the practitioner would have the option of doing one or the other. Over a century later, a few teachers came from the northern provinces of China.

Yi Dynasty (1392–1910)

During the early years of the Yi Dynasty, Korea's trade with distant areas of the Orient increased rapidly. In 1393, ships came from far-off Siam and eight years later from Phalembang (Java), laden with exotic herbs and spices. Beginning in 1442, many plants were brought from Arabia. Most important was the rose oil, noted in a textbook published in 1445 and entitled Uibang Ryuchoo.

A highly significant event of the five-hundred-year period was the establishment of the Chinese-Korean market (Moon Chang) in 1628. Located in the northeast Chinese province of Lao Tung (Yo Tong), this was the only market open to non-Chinese for many decades. The Chinese traded their silk for Korean ginseng. Although they had attempted to grow ginseng, the best product still came from the Korean peninsula. The *Pon Cho* became the official pharmacopoeia; however, many of the newer potions were not listed. Korean medicine had gained such a foothold on its own people again and on the Chinese that a effort was made to revise the *Pon Cho*. Tw centuries later, Whang Do Soon final completed the new edition, *Pank Yak Ha Pyun*. The book was dedicated to Confi cius and attempted to justify the use of K rean medicine. Shortly thereafter, the ma ket closed, but the prescriptions were at la recorded.

The medical system varied little from th Koryo age, although the foremost medic authority was called the Chonigam, rathe than Taewigam. The leader supervised th court physicians and passed on qualific tions for practitioners. The social status c the physician deteriorated, so that the up permost class, Yan Bang, almost never en tered the profession and only men from th lower three groups would consider a med cal career. Some attempt to differentiate th branches of medicine became apparent wit the rise of specialists in surgery and obste rics.

An institute for women medical student Chesangwon, was established. Beginning i 1495, former concubines were taught th fundamentals of medicine. With more ad vanced study, a distaff physician or uniny could become a practitioner of interna medicine, of nursing, or of primary or in tial medicine. Because the women c Chosum rarely left their homes and neve permitted a man, other than their hu bands, to touch them, these uninyo had ready-made practice.

Of all the Yi rulers, King Sejon (1397–1450) showed the most concern fo public health. He visited thirty hot spring and requested that his scholars study way of utilizing the salubrious waters. He is als remembered for instituting the Korean a phabet, han-gul.

Conclusion

Western medicine was not introduce into Korea until 1884, when a medical mi sionary, Horace Benton Allen, was called i to save the prime minister, who was no faring well from an assassination attemp

ecause the Western physician was success-
l and the Han Yak practitioners had not
en, the king created the post of court
ysician for Allen.

Today, the School of Oriental Medicine
Kyong-Hui University in Seoul conducts
one-year course to prepare practitioners of
aditional medicine for a national qualify-
g examination. These graduates need
ever fear the inroads made by Western
edicine, for the majority of Koreans still
ok upon Han Yak as the first choice. How
n a system over four thousand years old
wrong!

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S. Weir Mitchell: Investigations and Insights into Neurasthenia and Hysteria[1]

By KENNETH LEVIN, B.A., B.A.(OXON.)[2]

In the United States as well as in Europe, the first investigations into the psychoneuroses were made by men who were trained as neurologists and who had previously made considerable contributions to neurology. Such was the case with Sigmund Freud, with Jean Martin Charcot, and with S. Weir Mitchell.

Mitchell's international reputation as a neurologist was established by the publications which resulted from his experiences in the military during the Civil War (1). In collaboration with Drs. George Morehouse and W. W. Keen, but depending largely on his own skill and acumen, Mitchell produced first a pamphlet on *Reflex Paralysis,* concerned with the effects of injuries to the motor cortex. Next he published *Gunshot Wounds and Other Injuries of the Nerves,* a book later reworked by Mitchell as *Injuries to the Nerves and their Treatment.* Finally, he produced a scholarly compendium of his war work, *Medical and Surgical History of the War of the Rebellion.* All three works were widely acclaimed on both sides of the Atlantic. The decade after the war Mitchell devoted largely to revision and amplification of these studies and to parallel investigations.

But in 1877 Mitchell published a book entitled *Fat and Blood: Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria,* his first extensive contribution to the study of mental illness. The concept of neurasthenia had been developed in America by George Beard some years earlier. Mitchell's conception of the syndrome incorporated, along with Beard's pioneerin formulations, his own analysis of mental f tigue and the deleterious effects of ove work on the nervous system. In *Wear an Tear,* produced in 1873, Mitchell had di cussed this question of mental fatigue some length (2). Influenced by the attac of his friend Oliver Wendell Holmes o American working habits, he too decrie Americans' style of work and their inabili to play. But he concluded that in health people mental fatigue did not occur. Wh was mistaken for such was merely physic discomfort. The source of mental fatigu proper was, rather, worry or anxiety a pended to excessive work. Mitchell carrie over this formulation to the 1877 text. H further incorporated into his picture neurasthenia the gynecological factors trad tionally associated with the etiology of hy teria and related mental disorders, as we as the notion of the 'fraud' which was the particularly popular in Germany as an e planation of such disorders.

Mitchell (3) offers us the following con posite sketch of the neurasthenic: " woman, most often between twenty an thirty, strained from nursing a relati (with the emotional excitement, hopes an fears, neglecting of self, etc., which go along with this), or from illness, or an in tial local uterine trouble. She grows pal thin and weak, sleeps ill and wakes unr freshed, needing stimulants and tonics. the case did not begin with uterine trouble they soon appear; and their treatmen usually fails. The same applies to the dy pepsias and constipation which also appea Soon one sees emotional irritability an hysterical displays. The patient grows i creasingly selfish, takes to her bed, and the acquires the tender spine and furnishes

[1] Edward Bell Krumbhaar Prize Essay IX, Section on Medical History, The College of Physicians of Philadelphia, 3 November 1970.

[2] Class of 1972, The School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

most lamentable example of all the strange phenomena of hysteria." One may discern in this sketch reference to all of the variously proposed etiologies of neurasthenia mentioned above: overwork, anxiety, uterine pathology, and, finally, mimicry, which is alluded to in his reference to the patient's increasing selfishness. This is typical of Mitchell. His approach to disorders is clinical rather than theoretical and his emphasis is on presenting clinical pictures rather than on establishing etiological priorities.

For Mitchell, hysteria refers essentially to cases of advanced neurasthenia in which the emotional manifestations predominate; yet, again he acknowledges the possibility of other, perhaps specific, etiological factors, such as ovarian or uterine disorders, or even spinal irritation. Spinal irritation had been proposed as a possible cause of hysteria by Sir John Erickson in his discussion of "railway spine" and hysterical symptoms in victims of railway accidents. We can thus account for Mitchell's reference to 'tender spine' in the sketch presented above.

The low priority which Mitchell gives to the assertion of specific etiologies has its consequences for his approach to therapy. Having acknowledged both physiological and psychic factors, the importance of physical debilitation and anxiety, Mitchell (4) arrives at the necessity of ministering to both. He tells his reader, "If I succeed in first altering the moral atmosphere which has been to the patient like the very breathing of evil, and if I can add largely to the weight and fill the vessels with red blood, I am usually sure of giving general relief." He goes on, however, to voice the possibility of being defeated by the patient's taste for invalidism, again readily acknowledging the multitude of factors involved rather than limiting his perspective.

The program he here prescribed is the basis of his famous "rest cure," which he had originally outlined in 1875 in an article entitled "Rest in the Treatment of Nervous Diseases" (5).

The rest cure as psychotherapy is designed to offer the patient some seclusion, to remove her from her usual moral and physical surroundings, to release her from decision-making responsibilities and to sequester her from hurtful sympathy and over-zealous care. Mitchell (6) notes: "I am often asked how I can expect by such a system to rest the organs of mind . . . to this I should answer that it is not the mere half-automatic intellectuation which is harmful to men or women subject to states of feebleness or neurasthenia, and that the systematic vigorous use of mind on distinct problems is within some form of control. It is thought with the friction of worry which injures and which must be relieved. The man harassed by business anxieties, the woman with morbidly-developed or ungoverned maternal instincts, etc."

As physical therapy, rest is to be used where fresh air, exercise, tonics and stimulants have failed. Mitchell identifies the physical weakness of the neurasthenia syndrome with undernourishment and therefore insists that rest be combined with overfeeding. To overcome the deleterious effects of rest, such as loss of appetite, weakened digestion and constipation, he prescribes passive exercise obtained through steady use of massage, electricity and careful dietetics.

The rest cure gained quick and widespread praise in Europe. *Fat and Blood* was soon translated into French and German and by the turn of the centruy had gone through eight English editions. The emphasis in the book on clinical analysis, combined with the obviously demonstrated clinical acumen and therapeutic skill of the author, undoubtedly accounts to a large extent for the book's success and the method's popularity. The women he described in the gamut of his clinical presentations were, as he said, of a type "known to every physician." His own therapeutic successes, generated, no doubt, more by his personal insight and forcefulness than by any particular therapeutic formula, raised hopes in his

colleagues of similar successes with these generally recalcitrant patients. His accommodation of all the major etiological formulations served to render his program acceptable to physicians of most schools and further increased its popularity.

Typical is a review of Leyden's German translation written by Freud (7) in 1887. He states, "The therapeutic procedure proposed by Weir Mitchell, the highly original nerve specialist in Philadelphia, was first recommended in Germany by Burkart and has been given full recognition during the last year in a lecture by Leyden. This procedure, by a combination of rest in bed, isolation, feeding up, massage and electricity in a strictly regulated manner, overcomes severe and long-established states of nervous exhaustion . . . . (The text) contains the most valuable advice for the selection of cases suitable for the treatment in question and some interesting remarks on the operation of the different therapeutic forces which compose the Weir Mitchell treatment. It will no doubt bring a widening of his knowledge to every physician." Freud made considerable use of the Weir Mitchell treatment during the years that followed and in *Studies in Hysteria* wrote very favorably about the results of combining it with Breuer's cathartic treatment (8).

The rest cure gained such general popularity that there is even a reference to it by Nietzsche. Writing on the nature of priestly aristocracies in his monograph, *On the Genealogy of Morals,* Nietzsche (9) observes: "There is from the first something unhealthy in such priestly aristocracies and in the habits ruling in them which turn them away from action and alternate between brooding and emotional explosions, habits which seem to have as their almost invariable consequence that intestinal morbidity and neurasthenia which has afflicted priests at all times; but as to that which they themselves devised as a remedy for this morbidity—must one not assert that it has ultimately proved itself a hundred times more dangerous in its effects than the sickness it is supposed to cure? . . . Think, for example, of certain forms of diet, of fasting, of sexual continence, of flight 'into the wilderness' (the Weir Mitchell isolation cure—without, to be sure, the subsequent fattening and overfeeding which constitute the most effective remedy for the hysteria induced by the ascetic ideal)."

The subject of neurasthenia is once more taken up by Mitchell in *Doctor and Patient,* published in 1887. While again admitting all of the proposed etiological factors, including severe physical stress, a chronic disturbance of nutrition, or some sudden shock, Mitchell now states that the origin of neurasthenia is mental while the effects are mental and/or physical. This is a further development of his emphasis on fear and anxiety in his earlier presentation. Presumably, then, all of the physical etiological factors are now to be viewed as initiating neurasthenia through their emotional repercussions.

The therapeutic formula again involves rest. But Mitchell also discusses the importance of the patient's faith in her physician and the need for such faith to facilitate the use of suggestion as a tool for doing away with phantom hysterical complaints. The use of suggestion is an indication of how far Mitchell carries his therapy beyond simply the rest treatment. His insight into his patient's needs and his skill in coping with them is even more dramatically demonstrated in the following passage from *Doctor and Patient* (10): "The position of the physician who deals with this class of ailments, with the nervous and feeble, the painworn, the hysterical, is one of the utmost gravity. It demands the kindliest charity. It exacts the most temperate judgements. It requires active, good temper. Patience, firmness and discretion are among its necessities. Above all, the man who is to deal with such cases must carry with him that earnestness which wins confidence. None other can learn all that should be

learned by a physician of the lives, habits and symptoms of the different people whose cases he has to treat. From the rack of sickness sad confessions come to him, more, indeed, than he may care to hear. To confess is, for mysterious reasons, most profoundly human, and in weak and nervous women this tendency is sometimes exaggerated to the actual distortion of facts. The priest hears the crime or folly of the hour, but to the physician are oftener told the long, sad tales of a whole life, its faraway mistakes, its failures, and its faults. None may be quite foreign to his purpose or his needs. The causes of breakdowns and nervous disaster, and consequent emotional disturbances and their bitter fruit, are often to be sought in the remote past. He may dislike the quest, but he cannot avoid it. If he be a student of character, it will have for him a personal interest as well as the relative value of its applicative side. The moral world of the sick-bed explains in a measure some of the things that are strange in daily life, and the man who does not know sick women does not know women." Mitchell's therapeutic insights thus extended not only to Bernheim and Janet's suggestion but also, in some measure, to Breuer and Freud's catharsis.

It is of course clear that Mitchell thought women especially subject to neurasthenia and hysteria. This is not simply a result of the traditional view of hysteria. It is consistent with his notions of the important role played by nutritional inadequacies and other physiological derangements in producing these syndromes. In his view, the "great physiological revolutions of a woman's life" are key factors in those physical failures which help create nervous disorders (11). In this vein, Mitchell repeatedly recommends the fostering of strong moral and physical constitutions in women through exercise and physical exertion and the promotion of self-reliance, independence and toughness. He similarly argues against overexertion in young women and is firmly against submitting girls to the strains of college.

Dr. Mitchell's relative unconcern with theoretical arguments on questions of specific etiology had already been noted; and his belief in the importance of female physiology in the etiology of neurasthenia and hysteria did not prevent him from acknowledging cases of hysteria in men. In his *Clinical Lessons on Nervous Diseases,* 1897, he mentions coming across several such cases, although he adds that the fully developed hysterical syndrome is very rare in the male. In 1904 he published a paper entitled "A Case of Uncomplicated Hysteria in the Male."

However, in a chapter of *Doctor and Patient* entitled "The Moral Management of Sick or Invalid Children," in which Mitchell deals with the problems of overindulgence of such children by the mothers who nurse them, the author insists that the emotional instabilities displayed by such children are not of an "hysterical nature", even though the specific cases he cites and the symptoms he mentions are virtually identical to those he has already classed as hysterical. Undoubtedly his hesitancy to label these children as suffering from hysteria is derived from his belief, on theoretical grounds, that that disease is particularly the province of young women.

Similarly, Mitchell's failure to appreciate properly the role of sexual factors in the etiology of the neuroses must be ascribed largely to his insistence on nutrition and the debilitating aspects of female physiology as major etiological factors. He does, in fact, acknowledge to some extent the importance of sexual behavior in these illnesses, but only in a fashion consistent with his belief in the dangers of overexertion and with standard views on the importance of gynecological factors. Thus, in an essay written for F. X. Dercum's book, *Nervous Diseases,* Mitchell states: "The history of the sexual life of the patient is also of great importance. Sexual excess, and especially

abnormalities in the performance of the sexual act ... are definitely related to various functional and organic nervous diseases." (12). But he never arrives at the etiological significance of sexual repression. To appreciate how considerable an oversite this is, one must remember that the role of sexual abstinence in the etiology of hysteria was widely postulated at this time, not only by neurologists and psychiatrists but by physicians in general. An indication of this is gotten from a statement by Hughlings Jackson in 1879. In a lecture entitled *On Affection of Speech from Disease of the Brain,* Jackson argues that in organic brain damage loss of speech is always accompanied by loss of the ability to write. As to those cases in which speech is apparently lost while writing is preserved, Jackson notes pointedly that they always occur in boys or unmarried women. The implication is that these people were suffering from hysterical rather than organic aphasia; and, the lecturer obviously expected his audience to be familiar with the peculiar vulnerability of these groups to hysteria and, implicitly, with the etiological role of abstinence.

Hughlings Jackson was, by the way, a friend and admirer of Mitchell's. A typical reference by Jackson to his American colleague is this one (13) made in the context of a discussion of post-epileptic automatism: "Perhaps the most valuable of all cases of the kind is one recorded by Weir Mitchell, in a paper on the 'Use of Nitrite of Amyl.' Everything this physician writes is of the best." Mitchell, in turn, dedicated to Jackson his 1885 text entitled *Lectures on Diseases of the Nervous System, Especially in Women.*

Mitchell's failure to recognize this widely acknowledged sexual factor in the etiology of the neuroses is most significant for any attempt to fathom the source of his successes. An understanding of the man's genius must reconcile such substantial oversights with his startling insights, particularly with his outright assertion that the source of neurasthenia and hysteria is mental—a thesis at which Freud arrived conclusively only after considerable struggle and hesitation, because of its disharmony with the tone of his medical education and neurological work. Once again, the source of Mitchell's successes can be found in his strengths as a clinician. His ability to cope with the somatic symptoms of neurasthenic and hysterical patients through the imposition of his own personality and strength of will over that of the patient, a record of success not even approached by any of his contemporaries, reinforced indications of a possible mental source for these symptoms and for these illnesses generally. A similar process of extrapolating from his clinical successes led directly to his appreciation of the significance of suggestion and catharsis.

Mitchell's emphatic assertion of the mental origin of the neuroses is reiterated in his comprehensive study of psychosomatic phenomena, the above-mentioned *Lectures on Diseases of the Nervous System, Especially in Women.* Those contributory physical factors—exhaustion from overexertion, undernourishment, feminine physiology and gynecological difficulties—are again mentioned, but implicit throughout the book is the overwhelming primacy of mental and emotional factors. Consistent with his disinclination towards theory, Mitchell never pursues to any depth the question of mechanisms by which physiological pathology influences the emotions and one's mental state—problems which occupied so much of Freud's early efforts.

On the question of psychic factors inducing neurasthenia and hysteria, Mitchell (14) mentions emotional exhaustion, emotional trauma, and mimicry of disease motivated by "sensitiveness, morbidity, timidity and emotionalness, and greed for attention." The mental basis of the neuroses and, particularly, the importance of a desire for attention and of similar volitional elements as etiological factors lead Mitchell neces-

sarily to cope with the question of to what degree the physical symptoms of hysteria are consciously induced. He concludes that, although mimicry of symptoms is a key element, patients do not exert conscious control over them; for example, a person suffering from hysterical paralysis could not necessarily run in case of fire as "popular belief has it." Similarly, the neurasthenic's learning to mentally influence bodily functions, such as inducing vomiting or constipation, does not mean having the power consciously to will the trouble but, rather, involves some other level of mental control. Thus, without using the term "unconscious," Mitchell makes extensive use of the concept. Elsewhere he speaks of automatic imitation which is not conscious and which is the basis of a good deal of the mimicry of disease (15). This interpretation of hysterical phenomena again emerges from the perspective of his clinical successes. The role of patient instruction and suggestion, the need to convince his patients that they can be helped, which was so important to the cures he achieved, led him to conclude that mental levels below that of consciousness were involved in symptom formation (16).

Throughout this presentation I have argued the special nature of Weir Mitchell's insights into the neuroses and the emergence of those insights from his superb clinical skill. A comparison to Freud's early work in the same area is very much a comparison of the artist to the scientist. Freud, who was trained in the most rigorous tradition of experimental medicine, was motivated from the first toward the development of exact, unambiguous and comprehensive models of the phenomena he studied. In contrast to abstract systemization, Mitchell was concerned primarily with conveying to his readers subjective interpretations of clinical triumphs. This difference in approach and attitude goes a long way, I believe, towards explaining the limitations of Mitchell's impact on subsequent investigations of the neuroses. It also, however, points to Mitchell's unique and invaluable contribution. His consistent success in treating neurasthenic and hysterical patients was a vital source of inspiration to those, including Freud, who sought to pursue the thesis of the psychic etiology of the neuroses.

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Reminiscences of Public Health in Pennsylvania: The Cleft Palate Program[1]

By ROBERT H. IVY, M.D., D.D.S., SC.D. (HON.)[2]

The more I have thought about what to say today, the more I realize how little I know of routine public health matters, so I hope you will overlook this ignorance on my part about the subject in general and forgive me if I speak chiefly about a special field which has now been fairly well established as a public health activity, first in Pennsylvania, and then in other parts of the United States, Canada and elsewhere. I refer to the problem of children born with physical and other handicaps due to oral, facial and communicative disorders, the commonest of which are cleft lip and cleft palate.

For many years, fairly adequate care had been provided by government public health agencies and private organizations through crippled children's programs for those with congenital and acquired deformities of the *limbs and trunk,* but a long time was required for some of these agencies to recognize that any deformity *above the neck* could be a sufficient handicap to be worthy of inclusion in any of their programs. One of the leading proponents for recognition of cleft lip and cleft palate as a crippling handicap was Herbert K. Cooper, D.D.S., orthodontist, of Lancaster, Pennsylvania. He spent much time pointing out that the unsightly facial appearance and poor speech associated with this deformity frequently constituted more of a deterrent to white collar employment than the lame arm or leg following poliomyelitis, or other well-publicized handicaps. He reminded us that a person with unpleasing facial appearance and defective speech accompanying cleft lip and palate could never aspire to be President of the United States, yet a man with lower limbs paralyzed from poliomyelitis, which practically confined him to a wheel chair, but with a handsome face and golden voice, was elected to serve four terms as President of the United States, longer than any other person.

The Importance of Cleft Lip and Palate

Why is this deformity—cleft lip and palate—of importance to the individual and the community? The deformity produces defective speech, dental deficiencies and irregularities, unsightly facial appearance; it is frequently accompanied by hearing loss and psychic disturbances. Many times these children are slow to learn, not because of inferior mentality, which is no more frequent in cleft palate children than in children with normal palates, but because they are frustrated by inability to express themselves clearly and may also have accompanying hearing defects. Many of them become withdrawn because they feel they are different from other children; therefore, they are reluctant to take part in general activities, being fearful of becoming butts of ridicule. As they grow older, many are unable to find suitable employment because of poor speech and unprepossessing facial appearance. If their deformity is allowed to go uncorrected, the victims may become public

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[2] Emeritus Professor of Plastic Surgery, The School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania; 104 Dalton Road, Paoli, Pennsylvania 19301.

charges and burdens for their families and the community in general; whereas, if subjected to proper treatment, they can in most cases be converted into useful citizens capable of earning their own living. Therefore, this deformity should be included as part of any local, state or federal public health program, and public money spent on habilitation of these cases will generally be fully repaid in taxes on their earnings later in life.

As evidence of the tremendous advances that have been made in recent years in the management of this deformity, I can cite my own experience. In my early days of practice in Philadelphia during the second and third decades of the 20th Century, the treatment of cleft lip and cleft palate both here and in the United States generally was very unsatisfactory. Although a few surgeons from time to time had been accepted as specialists in this field, most general surgeons regarded the condition as being in their domain and cases were routinely listed by them along with abdominal and other operations during a morning's work schedule. The cleft lips and palates, not being 'clean cases' so-called, were usually scheduled at the end of the list, with the result that, if the surgical chief had tired himself out with the appendectomies, cholecystectomies, hernias, etc., the unfortunate child with the cleft lip or palate frequently would be turned over to an inexperienced assistant or resident toward the end of the morning. I well remember one prominent general surgeon in Philadelphia who routinely and deliberately amputated and discarded the markedly protruding premaxilla in bilateral cleft lip and palate cases, in order to facilitate surgical closure of the lip. The deplorable mutilations of innocent children, which resulted from practices such as these, can be imagined, and some of the unfortunate victims are still occasionally seen.

It is true that much better conditions prevailed even in those days when children were cared for by surgeons who were recognized specialists in the field and had wider clinical experience with these cases. Even then, the results left much to be desired because of failure on the part of some of the surgeons to recognize the importance of other components of overall care and the almost complete absence of facilities to provide these important services. Early in my special practice, with my early training in dentistry as well as medicine, I began to recognize that with the performance of the surgery my responsibility to the patients was not ended, but that a majority of these needed general dental, orthodontic and prosthetic aid, and speech therapy. The financial problem was a serious one, because most of these children were in lower income bracket families with practically no means of paying for these services and the services were very limited on a voluntary basis. Dentists have been subjected to unjust criticism by surgeons and others from time to time for their reluctance to contribute much of their time and efforts to the care of charity patients. These critics should be reminded that dentists operate under conditions different from those of surgeons. In performing free hospital operations, the surgeon donates only his time and skill, the hospital furnishing without cost to him the space, materials, instruments, assistants and nursing. The dentist, on the other hand, working usually in his private office, in addition to contributing his time and skill, has to pay out of his own pocket for office rent, assistants, materials and dental laboratory work. Agencies, such as the crippled children's societies, and service clubs, such as Rotary, Kiwanis, and the Lions, have been and still are of great help in the solution of some of these problems. But the specialized services required for complete habilitation could not be totally provided on a voluntary basis, and state and finally federal funds became necessary. One of the states farthest advanced in this field is Pennsylvania, where about 300 cleft lip-

cleft palate children are born each year, or about one in 760 births. The deformity is among the commonest of birth anomalies, ranking second in frequency to various forms of club foot.

The Pennsylvania Program for Cleft Lip and Palate

How was the special cleft lip-cleft palate program initiated in Pennsylvania? Through the efforts of the previously mentioned Herbert K. Cooper, D.D.S., Lancaster orthodontist, in the early 1930's, with the help of the Lancaster Rotary Club, the Lancaster Cleft Palate Clinic was founded to provide various forms of dental care for some of the cleft palate cripples, chiefly those whose deformities resulted from incompetent surgery. This clinic has gradually expanded over the years to include all disciplines involved in providing complete diagnostic and remedial medical, surgical, dental and other over-all services to sufferers from facial, oral and maxillary defects, and it has thus become the foremost institution of its kind in the world. Through Dr. Cooper's efforts and those of others in the State, the first recognition by the Pennsylvania Department of Health that the child born with a cleft lip, cleft palate or both could be a Public Health problem came in 1939, when my friend Dr. John J. Shaw, surgeon of Philadelphia, was Secretary of Health in the state government at Harrisburg. At that time, Dr. Shaw stated to me that he had been impressed with the poor surgical care the children of underprivileged families with these deformities had been receiving and requested me to suggest the names of a few surgeons in the state who had given special attention to this particular deformity. He was prepared to offer these men appointments, on a modest annual salary, to provide surgical care to these unfortunate children under Crippled Children's Program of the Department of Health. I gave him the names of five well-established surgical specialists in the field: Warren B. Davis, George Morris Dorrance, Lawrence Curtis and Robert H. Ivy of Philadelphia and Evan Meredith of Pittsburgh. Although several other surgeons in Pennsylvania of that period routinely accepted cases of cleft lip and palate along with general surgical conditions, these five were the leading established and recognized men in the field at the time. Dr. Shaw immediately had the five men appointed, with authority to perform all the cleft lip and palate surgery on children registered with the Crippled Children's Division of the Pennsylvania Department of Health, through which the State also paid for hospitalization. At that time, I pointed out to Dr. Shaw that hospitalization and competent surgery were only a part of the solution of the cleft lip-cleft palate problem and that a complete program should include pediatric services, general dental, orthodontic and prosthetic care, speech evaluation and therapy, nursing, social service, etc. He said he was quite aware of this, but the funds then appropriated by the state were sufficient to cover only the entering wedge and that expansion would have to be a matter for the future if improved surgical results from the limited program were demonstrated.

Ten years later, early in 1949, appreciation of the need for more complete services to those afflicted with the deformity led the then Secretary of Health, Dr. Norris W. Vaux, to recommend the establishment of a Cleft Palate Division in the Bureau of Maternal and Child Health, and this was approved by the Executive Committee of the Commonwealth on February 17, 1949. The stated functions of the Cleft Palate Division were "the study, treatment and rehabilitation of children up to sixteen years of age who are afflicted with cleft palate and/or cleft lip." The State Legislature then appropriated $50,000 to finance the program for the fiscal year July 1, 1949 to June 30, 1950. Pennsylvania was thus at that time, and as far as I know still is, the only State whose Health Department considers cleft lip and

cleft palate of sufficient importance to place the management of the deformity under a special division or section separate from that for Crippled Children. Patients up to 21 years of age could be continued on the program for treatment if they had no job handicap which would make them eligible for care under the Bureau of Rehabilitation of the State Department of Labor and Industry.

Upon receipt of notice that the expanded Cleft Palate Program had been officially approved and funds provided to get it started, Dr. Vaux and Dr. Paul Dodds, Director of the Bureau of Maternal and Child Health, requested me to come to Harrisburg to discuss some of the details of implementation of the expanded program. At our meeting in the office of the Secretary of Health, then in the South Office Building, the first question arose of finding a chief to head the Cleft Palate Division and to organize the program. Several possible names were mentioned with no very enthusiastic reaction, and finally I said, "What about me?" In probably simulated surprise, both men said, "Would you take it?" I replied, "Yes, if I don't have to sever immediately all my hospital, university and practice connections in Philadelphia and spend five days a week in Harrisburg as a full-time employee of the State. If I did this, I might lose my job in Harrisburg after a year of two, perhaps because of a change in administration, and have nothing left in Philadelphia to which to return." The two men assured me that I could at first spend two or three days a week in Harrisburg to get the program started and later complete arrangements for a full five-day week there as I gradually relinquished one by one my hospital appointments and private practice in Philadelphia. I was then 68 years old and had already passed the usual retirement age for most surgeons in Philadelphia hospitals. This salaried position appealed to me as a useful service, something with which I was familiar, with satisfactory remuneration as long as I was able and willing to work. At the end of the interview, Drs. Vaux and Dodds presented me with an official application form for the position, to be completed and signed by me and returned as soon as possible to Harrisburg. In those days, practically all appointments to positions under the Pennsylvania state government were controlled by the leaders of the political party in power at the time, and the party then was Republican, under Governor Duff. At the time of my application I gave little thought to this, although I was registered as a Republican. A week or two after signing and sending in the application to Harrisburg, I received a telephone call in my Philadelphia office from a sweet-voiced young lady who said, "Dr. Ivy, I am the secretary of Mr. Meade, Chairman of the Republican Committee of Philadelphia County. We have received your application for the position with the Pennsylvania Department of Health in Harrisburg and notice that you have listed 1930 Chestnut Street, Philadelphia, as your address. Is that your home residence?" I said, "No, that is my professional office. My home is in Lansdowne, Delaware County." She replied, "In that case, Mr. Meade cannot indorse your application. It will have to be acted upon by the Chairman of the Delaware County Republican Committee, Mr. John J. McClure. We will forward your application to him." A few days later, at my Lansdowne home I received an evening telephone call from my old friend and neighbor Herbert Hays, an employee of the Delaware County offices in Media. He said, "Bob, you know I am your Republican precinct leader here in Lansdowne, and your application for the position at the Health Department in Harrisburg has been approved by John J. McClure and all down the line to me, and if you want the job you can have it." I thanked him profusely and hung up. Later, when I told Drs. Vaux and Dodds of this experience, they laughed, and said "We want you for the job, whether you are a

Republican, a Democrat or even a Communist." In those days, practically all appointments to positions with the state government depended upon which political party was in control, and even Cabinet selections did not always depend on suitability for the position. The Health Department, until more recent years, did not usually have a trained public health officer, but generally a prominent physician or surgeon with organizing ability and foresight, who happened to be of the same political faith as the party in control at the time. For instance, Dr. John J. Shaw, a co-intern and resident with me at the Episcopal Hospital in Philadelphia, had married a daughter of one of the Vare brothers, then bosses of the Republican party in Philadelphia. Dr. Vaux, a 1905 graduate of the University of Pennsylvania School of Medicine, had been Professor of Obstetrics at the Jefferson Medical College. Dr. Paul Dodds, Director of the Bureau of Maternal and Child Health and my immediate superior and guide in the intricacies of Health Department procedure, had more appreciable qualifications for his position, as he had been for several years an active practitioner of obstetrics in Pittsburgh. The political system for state government employees in Harrisburg worked out fairly well when only state funds were used to finance the programs and pay the employees, but as time went on these programs expanded so much that federal funds had to be sought to pay for them in whole or in part, and federal regulations came into effect. In order to receive federal funds, those heading health and other state programs had to be professionally rather than politically qualified for their positions, determined by Civil Service regulations and examinations. Therefore, in the middle 1950's, all Health Department employees were put under the merit system, regardless of their political affiliations, and thus were assured of security in their jobs regardless of political party in power, provided they performed their duties satisfactorily, and I believe this system is still in effect. Beginning in 1951, with the appointment of Russell E. Teague, M.D., D.P.H., an officer of the United States Public Health Service, as Secretary of Health of Pennsylvania, this position has been occupied by professionally trained Public Health officers, and several of the top state employees in the Health Department have also been trained public health personnel. Dr. Teague was succeeded in 1955 by Berwyn F. Mattison, M.D., also a U.S. Public Health Service official, and Charles L. Wilbar, M.D., who had been Health Commissioner in Honolulu, Hawaii, became Deputy Secretary of Health. In 1959, Dr. Mattison resigned to accept the position of Executive Secretary of the American Public Health Association and was succeeded by Dr. Charles L. Wilbar as Secretary of Health under the Democratic administration of Governor David L. Lawrence. Dr. Wilbar was still Secretary of Health under Governor Scranton when I retired as Chief of the Cleft Palate Section in 1966. During my later years, the bureaus, divisions, sections and sub-sections of the Department of Health had expanded to such an extent that those in the lower echelons had very little chance for direct communication with those at the top, where the incumbents sat in their ivory towers quite inaccessible except through devious channels. How different this had become as compared to the simple, personal and friendly days of Norrie Vaux, when everyone was on a first-name basis, and at the monthly staff meetings there was sufficient room at the big round table to accommodate even the section chiefs in addition to the directors of the various bureaus!

In order for some of the established section chiefs and others to achieve full recognition under the merit system, courses of indoctrination in public health matters were established at one of the State Tuberculosis Centers, each of several weeks' duration, which were attended by several of the administrative and professional employees.

While I was invited to attend one of these sessions, it was not considered mandatory in my case as my education and specialty board certification were considered as sufficient evidence of qualification for my particular position. Some of my cynical confreres, on return from these courses, described them in large part as "brain-washing."

During some of the earlier years of my service at Harrisburg, the Department of Health was more generous than later in respect to payment of travel and hotel expenses for employees presenting papers on their particular field of work at professional meetings. Thus, in 1951, at state expense, I presented a paper at the Meeting of the American Society of Plastic and Reconstructive Surgery at the Broadmoor, famous hostelry at Colorado Springs, entitled "Modern Concepts of Cleft Lip and Palate Management"; later, I presented in Honolulu, Hawaii, a paper entitled "Present Trends in the Management of Cleft Lip and Cleft Palate." Later, however, the purse-strings were tightened, and, while short leaves were granted for attendance at professional meetings in this country and abroad, they seldom included travelling and maintenance expenses, even though I may have been speaking on the subject of the Pennsylvania Health Department Program.

The sometimes rather monotonous days spent by some of us in the Health Department were brightened by periodic meetings at lunch-time of a strictly non-official, self-constituted "Committee of Eight," membership comprised, as I recollect, of 1., Mr. John W. German, Jr., venerable Chief of the School Health Division in the Bureau of Maternal and Child Health; 2., his Administrative Assistant W. MacPittenger, famous fisherman and fly-tier of Carlisle, Pa., World War I combat veteran and later entertainer of troops, very active in the State American Legion and Republican politics; 3., Paul Dodds, M.D., Director of the Bureau of Maternal and Child Health, Princeton and Columbia University medical graduate, World War I Army Medical Officer with combat troops; 4., Franklin E. Chamberlin, M.D., Chief of the Crippled Children's Division; 5., Harold B. Wood, M.D., graduate of the University of Pennsylvania School of Medicine and long time Health Officer of Rochester, Minnesota, home of the Mayo Clinic, Statistician to the School Health Division; 6., Robert H. Ivy, M.D., Chief of the Cleft Palate Division; and 7., and 8., David D. McCullough and Earl F. Grimes, of the Bureau of Vital Statistics and administrators of the registry of Births and Deaths in the State. At these informal gatherings of the "Committee of Eight," the members could "sound-off" among themselves over whatever was going on in various parts of the Harrisburg offices of the Health Department and give full vent to their real or imaginary grievances and at times personal likes and dislikes, with full assurance that any remarks would be held in strict confidence and never betrayed to people outside the committee. Of course, no one outside our membership paid much attention to us except perhaps to wonder what we were talking about, but we all enjoyed this intimate fellowship like secret conspirators while it lasted.

It should be mentioned, however, that there was one very all-powerful committee in the Pennsylvania Department of Health, and that was the Advisory Health Board. I am not exactly sure just how the appointments were made to it, but the Chairman was always the Secretary of Health, and none of the other members was a Health Department employee. The board numbered about ten and consisted of several prominent physicians from various parts of the state, one dentist, a pharmacist, an engineer and two laymen. Herbert K. Cooper, D.D.S., of Lancaster, Pennsylvania, served as the dental member during practically all of the period of my employment with the Health Department, so I always knew I had a friend at court. Others known personally

to me who served at one time or another during my period of service were Paschal Lucchesi, M.D., Gilson C. Engel, M.D., Esmond R. Long, M.D., Elizabeth Ravdin, M.D., Russell B. Roth, M.D. and L. B. Longaker, pharmacist. The board held a regular meeting in the Health Department I believe every two or three months, and it is my understanding that their approval was required for practically every proposed major new project of the Department of Health.

There are many other interesting persons under or with whom I served in the Health Department at Harrisburg, but space limitations oblige me to proceed now with a few details of the operation of my particular activity, the Cleft Palate Program.

The Pennslyvania Department of Health Program, inaugurated in the late summer of 1949, is based on the idea that diagnosis, treatment-planning, and the actual treatment itself are best carried out through the joint activities of a group of clinicians working together as a team, each member having a voice in the planning, rather than performing the services through a series of separate procedures by several individuals working independently. The program is implemented through several clinical groups, now nine in number, each composed of representatives of the several disciplines concerned, located at convenient points in the state easily accessible to prospective patients in the region, where the state-sponsored children receive diagnostic and treatment services. In each case, a clinic is the result of local effort organized with the support of the Department of Health. Financial support is provided by Health Department funds and is on a fee-for-service basis. Each clinic is staffed and operated by local personnel, the only Health Department controls being the matter of authorization of services before payment of fees and the requirement of a certain standard of qualifications on the part of professional personnel. The surgeons must be certified by the American Board of Plastic Surgery and licensed to practice medicine in Pennsylvania. They receive special appointments from the Secretary of Health. For the Orthodontia and Prosthodontia, certifying Board requirements are not so rigid as for surgeons, but those selected are known to be proficient in their respective fields. The general dental care may be rendered by any reputable licensed dentist, known for his special interest in these cases. The oral surgery, as distinguished from the plastic surgery, may be done by a certified specialist of the American Board of Oral Surgery or by the plastic surgeon himself. The professional staff of each local clinic selects a chairman, usually the plastic surgeon but sometimes the pediatrician or a representative of any of the other fields involved. None of the clinic professionals is salaried by the state, all direct services being paid for according to a recognized fee schedule. Hospitalization is paid for at the average per-diem all-inclusive rate. When Blue Cross, Blue Shield or other health insurance exists, it is expected that this will be utilized to the full extent, the Health Department then being billed for any uncovered expense. Parents are expected to contribute to the cost of treatment to the extent their finances will permit. It is well-known that services, appliances, etc., that have been partly paid for by family contributions, no matter how small, are valued more highly than those supplied absolutely free of charge. Each of these group clinics holds a diagnostic, treatment-planning and follow-up session one or two days a month, with the exception of the Lancaster Cleft Palate Clinic, which is open continuously for treatment procedures and holds a diagnostic session one day a week. The program, in addition to cleft lip and cleft palate, includes the surgical and hospital care of other conditions in children, congenital or acquired, that are recognized as coming within the field of plastic surgery. Among these are congenital defects of the external

ear, syndactylism, polydactylism, hypospadias, mandibular prognathism and micrognathia, hemangiomas, nevi and other superficial tumors and cysts, as well as scar contractures from burns and other injuries resulting in tissue defects of all parts of the body.

Children needing help through the cleft palate program are brought to the attention of the section in several ways. Newborn babies with the deformity are discovered by the attending physician and through examination of birth certificates in the Division of Vital Statistics. It may be of interest to note here that in the early 1960's all states had provision for recording congenital malformations on birth certificates with the exception of Florida, Maryland, Mississippi, Oklahoma, and Hawaii. Since 1949, a card index of *all* congenital anomalies recorded on birth certificates in Pennsylvania, with names and addresses of children and physicians attending the births, has been kept in the office of the Cleft Palate Section Chief. Upon receipt of information from the birth certificate that a child with cleft lip-cleft palate deformity has been born, the attending physician is notified by the section office in Harrisburg of the availability of assistance from the state should these services be needed. Children with this deformity may also be reported initially by family physicians, dentists, public health and school nurses, hospitals, school teachers, welfare agencies or parents. Registration for care under the program is accomplished by completion of a Social History Form HBS 2300, preferably signed by the family physician, which is sent to the Harrisburg office. Determination of eligibility for *treatment* under the Program is facilitated by information furnished on this form regarding family finances, etc., although *examination* is free to all regardless of financial standing.

The multidisciplinary group plan was already in operation at the Lancaster Cleft Palate Clinic and the latter acted, when the Pennsylvania Health Department Program was first established, as a model to be followed in operation of the new clinic groups. The question may be asked whether the restriction of state funds to payment for services to certain recognized clinics and individuals only does not constitute a monopoly. The answer is that, with the number of clinics at present in operation and the number of children applying for treatment, fairly well-stabilized, sufficient services are available with existent facilities and the field is adequately covered. If every hospital in the state undertook to establish a cleft palate clinical team and expected state financial support for it, the supply of patients at all clinics would become so small that it would not be worth the time and trouble for any one clinic to continue. A tremendous task is involved in the organization and operation of these multidisciplinary group clinics, and unless a sufficient number of patients is served their establishment is not economically worthwhile. The Health Department position in the matter has been that whenever it could be demonstrated that a particular area of the state was not covered adequately in this field, favorable consideration to the establishment of a qualified clinical group in that area has been the result. The existing nine Pennsylvania groups are located as follows:

1. The Lancaster Cleft Palate Clinic, Inc., Lancaster.
2. Philipsburg Cleft Palate Clinic, State Hospital, Philipsburg.
3. University of Pittsburgh Cleft Palate Clinic, Children's Hospital, Pittsburgh.
4. Allentown Cleft Palate Clinic, Allentown General Hospital, Allentown.
5. Children's Hospital Cleft Palate Clinic, Children's Hospital, Philadelphia, affiliated with the University of Pennsylvania. The special dental procedures on patients attending this Clinic are carried out at the School of Dental Medicine, University of Pennsylvania.

6. Williamsport Cleft Palate Clinic, Williamsport Hospital, Williamsport.

7. Allegheny General Cleft Palate Clinic, Allegheny General Hospital, Pittsburgh.

8. St. Christopher's Hospital Cleft Palate Clinic, St. Christopher's Hospital for Children, Philadelphia, affiliated with Temple University Medical School, with the collaboration of Temple University Dental School.

9. Scranton, Wilkes-Barre Cleft Palate Clinic, alternative sessions between Wilkes-Barre and Scranton.

It is to be noted that the only area in the State not adequately covered in 1965 was the extreme northwest, and children from Erie and vicinity were obliged to travel a considerable distance to Pittsburgh to obtain state services. A state-sponsored group clinic was originally established at Erie, but was discontinued after a few years of operation when the only certified plastic surgeon there removed to California. At the time of my retirement in 1966, with the advent of a Board-certified plastic surgeon there, negotiations were under way to re-establish a Health Department-supported group cleft palate clinic at Erie, thus completing adequate coverage of the entire state.

Over a several years' period, an Annual Public Health Conference of the Pennsylvania Department of Health and the Pennsylvania Public Health Association was held for a week in August at Pennsylvania State University, State College, Pennsylvania. The Cleft Palate Section had a place on the program, including a meeting of the professional personnel of the several state-sponsored clinics, to discuss problems and experiences of common interest. On one occasion, a "mock" clinic session was presented, illustrating the procedures employed in the multidisciplinary approach to the examination, treatment planning and results of treatment of typical cases.

The *card index system,* constituting a record of all children born in Pennsylvania with a recognizable anomaly, covering a period of over fifteen years, has been a valuable tool in cleft palate case finding and in determination of the relative frequency of various birth deformities. In addition, the influence of race on the frequency of certain anomalies has also been demonstrated from these records.

In spite of certain sources of error inherent in dependence on information derived from birth certificates for estimating the relative frequencies of birth anomalies, nevertheless, year after year, there has been a remarkable consistency in the relative order of the commonest of these deformities, the first four or five being recorded as club foot, cleft lip and cleft palate, hypospadias, polydactylism and heart disease, in that order (4, 5, 6). Beginning with 1956, our cards began to include notation of the race (white or non-white) of each individual recorded. A study of these showed that cleft lip and cleft palate predominated in white children, retaining second place in frequency after club foot, but in non-white children, even surpassing club foot, polydactylism of fingers was by far the commonest birth deformity, while cleft lip and cleft palate fell in frequency of about one in 750 in whites to one in 4394 in non-whites (6, 8). Umbilical hernia is another congenital anomaly that occurs more frequently in non-whites than in whites.

A study of operative mortality of cleft lip and palate children during anesthesia for operation or operation itself under the program from 1961–1965 (9), showed three deaths in 2182 operations performed during the five year period, or 0.14 per cent. This remarkably low rate of operative and general anesthesia mortality in cleft lip-cleft palate cases is in line with the same low mortality rates for these cases now prevailing generally and is undoubtedly due to a more careful preoperative preparation from the pediatric standpoint, better selection as to time for operation, and, above all, technical advances in anesthetic administration and maintenance of adequate respiratory airway during operation.

In another study covering the years 1954

and 1955 of deaths of infants recorded on birth certificates in Pennsylvania as born with cleft lip-cleft palate (9), it was revealed that of a total of 303 born in 1954, 31, or approximately 10 per cent, died from various causes in the first year after birth. Fourteen, or almost half of these, died within the first 24 hours after birth. In 1955, of a total of 267 cleft lip-cleft palate births, 32, or about 12 per cent, died in the first year after birth, and 15, or almost half of these, died within the first 24 hours after birth. Nearly all had multiple anomalies and most of them were born prematurely.

It is not certain just what practical application these record cards may have from a general standpoint. They register all congenital anomalies and deformities recorded on live birth certificates in Pennsylvania for over fifteen years, and during my service were on file in the Cleft Palate Section, Pennsylvania Department of Health, Harrisburg, and as far as I know are still there and available for study by any accredited group or individual. Pennsylvania has been the leader in keeping such records, and for a long time was the only state to do so. Now, it seems that other states and federal agencies have become interested in the frequency of birth anomalies throughout the nation.

As to costs of this program, from the modest special appropriation of $50,000 in state funds in 1949 to get the Cleft Palate Program started, in the fiscal year 1965–1966 the annual cost had risen to over $300,000. Only for the first few years of the program were state funds specifically earmarked for its operation. Later, the federal and state funds for carrying out the cleft palate program were included in the overall budget estimate for the entire Health Department activities, and the amount allotted to the Cleft Palate Program was not determined by the Pennsylvania Legislature of the federal government, but the Pennsylvania Health Department itself. With the present restrictions and cut-back by both federal and state authorities, I cannot venture to predict the future of the Pennsylvania Health Department Cleft Palate Program, but here I have told you about what has been done and feel that it was the proper and only adequate way to cope with the problem.

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William Gibson, M.D., Anatomist, as Seen by a Student in 1823

By HAROLD J. ABRAHAMS, PH.D.[1] AND WYNDHAM D. MILES, PH.D.[2]

Baruch Spinoza somewhere remarks that "all excellent things are as difficult as they are rare." In William Gibson, M.D., a citizen of Philadelphia from 1819 to 1868, we have an example of rare excellence in doing difficult things.

The main facts of Gibson's life are well known. He was born in Baltimore in 1788 and studied at St. John's College in Annapolis, Maryland, and at Princeton, after which he attended one course of Dr. Philip Syng Physick's lectures at the University of Pennsylvania and, returning to Princeton, took his degree in 1806. He then spent four years in Europe, three of which were at Edinburgh where he obtained his medical degree in 1809 and learned surgery under John Bell. Next year, in London, he was befriended by Sir Charles Bell[3] under whom he was a private pupil and through whom he became acquainted with the artist Benjamin Robert Haydon. From them he learned to make excellent models in plaster and wax and to paint in oils and water color. He also formed a close friendship with Sir Astley Cooper, who took him on journeys about England. Hearing that there would be a battle at Corunna, Spain, he managed to secure a "merely formal appointment" which enabled him to obtain transportation and be present during the battle. Some years later he was present at the Battle of Waterloo and suffered a slight injury.

In 1811, at the age of 23, he helped establish the medical department of the University of Maryland, becoming the professor of surgery. He attained great success as a bold and original surgeon and as a teacher. His interest in the treatment of gunshot wounds dates from the many opportunities to study such injuries resulting from the battles of Bladensburg and North Point in the War of 1812 and at Corunna and Waterloo.

After holding the chair at Maryland for eight years, he left to accept the professorship of surgery at the University of Pennsylvania made vacant by the transfer of Philip Syng Physick to the chair in anatomy. He continued to be highly successful during the thirty-six years at the University until his retirement in 1855.

He was the author of *The Institutes and Practice of Surgery,* which originated as a guide to enable his students to follow his lectures and gradually grew into a major work on the subject, passing through eight or more editions; *Rambles in Europe,* in which he mentioned such famous persons as Napoleon Bonaparte, Madame Lafayette, Victor Hugo, Lord Byron, Benjamin Brody, and Alfred A. L. M. Velpeau[4]; six published *Introductory Lectures* and other works.

One biographer said that "his height was five feet nine inches, and weight one-hundred and sixty-pounds," while another stated that he was "about five feet seven inches high; broad, somewhat round shouldered; [with] a keen gray eye, a large head carried a little forwards—covered with gray

[1] Research Associate, Library of The College of Physicians of Philadelphia. Dr. Abrahams resides at Wessex House, St. Davids, Pennsylvania 19087.

[2] Historian, National Institutes of Health, Bethesda, Maryland 20795.

[3] William Gibson named his son Charles Bell Gibson. The great Philadelphia neurologist, William Gibson Spiller, was named for William Gibson.

[4] Velpeau showed him two men in a hospital, who had been "earning a living" for fifteen years by allowing themselves to be run over by light wagons driven by wealthy persons, then suing for damages. Nearly every one of their bones had been broken.

Fig. 1. William Gibson, M.D., 1788–1868. (Reproduced from an engraving of a daguerreotype made in 1847. Courtesy of the National Library of Medicine.)

hair which he says did not become so by years." He was a man of great learning, to which may be added that he possessed a sparkling wit, great courage and amazing frankness. (In order that other surgeons might not repeat his mistakes, he published a paper on his failures in the treatment of dislocations, "where he tried by means of force to reduce luxation ... the arteries were ruptured ....") The Latin of his medical school thesis, *De Forma Ossium Gentilitia*, is said to be beautifully euphonious, and his memory phenomenal—he once quoted at random three hundred lines from the second book of Virgil.

Gibson's lectures were clearly and logically expressed in language "pure and classical, flowing readily, as if written," and his training in art enabled him to make illustrations which, by their beauty, graced his lectures. He is quoted as stating these guide lines for a lecturer (1):

"...to constitute an able and successful lecturer, in the common acceptation of the term, in any department of medical science, there should be from nature an easy, quiet and composed demeanor, a simplicity of thought and action devoid of all affectation, a manner free from embarrassment of every description, a clear and distinct enunciation, a voice sufficiently powerful to reach the most distant hearers, susceptible of modulation, marked by peculiar intonation, so regulated in its cadence as never to terminate abruptly, and with great capability of emphasis, whenever the necessity for such a power may be called in requisition..."

Who could ask for more of a lecturer?

His widely ranging avocations give evidence of a full life: his interests included wood-working, taxidermy, fishing, playing upon the violin, and other hobbies. Great was his pride in the picture of the head of a lion painted by Sir Charles Bell (the lion having been dissected by the great surgeon).

He is credited with many daring and successful operations, but it seems to us that the neatest bit of surgery which he performed was that upon a lawyer friend. One day while the two were fishing another person picked a quarrel with them. Gibson fell upon the troublemaker and cudgeled him well, whereupon the beaten man brought suit. The lawyer friend defended Gibson in court, won his case, then sent the doctor a bill for his legal fee. Shortly thereafter Gibson invited the lawyer to another day of fishing, after which the friends sat under a tree and ate the lunch which the doctor had previously prepared, the lawyer's portion having been tenderly treated with tartar emetic. The lawyer became suddenly ill, had to be carried to a nearby farm house and was carefully ministered to by Doctor Gibson. Again there was a bill, this time for medical services, and amazingly enough the sum was exactly the same as the earlier legal fee!

A few years after Gibson moved to Philadelphia and began his long career as a teacher, a student whose initials were "N. H." [5] took courses at the medical school. Young N. H. had a friend in Ohio to whom he wrote letters describing mannerisms, methods and techniques of the Pennsylvania teachers. The friend found the letters so informative that he passed them to John Godman, editor of the *Western Quarterly Reporter of Medical, Surgical and Natural Science*. Godman liked them and decided to print them in his journal. The first, telling about Gibson's course, appeared in Volume 2, 1823, pages 108–111. Unfortunately the journal expired before the editor inserted

[5] It has not been possible to identify N. H., the writer of this letter, from the alumni catalogue of the University of Pennsylvania. He may have returned to the Midwest, perhaps to Cincinnati where the *Western Quarterly* was published, and taken a degree at some school located in that region. In passing, it may be pointed out that the letter by N. H. was reprinted without its introduction by the *Philadelphia Journal of the Medical and Physical Sciences* 6: 428–30, 1823. Of interest, also, is the fact that although Doctor Gibson was one of America's most distinguished physicians, as evidenced by the fact that he is one of the small number of doctors who appear in the *Dictionary of American Biography*, none of the persons who wrote sketches of him there or elsewhere cites the letter by N. H., and it would seem that its existence has remained hitherto unknown.

another of N. H.'s letters, and thus we have only one of what would have been an interesting series of word pictures of the medical school faculty of 1823.

The following letter is one of several which give a sketch of the University of Pennsylvania. The letters were written by a gentleman attending lectures in Philadelphia to an intimate friend in the Western Country.

Philadelphia, Feb. 12, 1823.

Dear W-----,

In this letter I resume my sketches, by presenting to your view some of the peculiarities of the Surgical chair of this school, which will be very proper after what I have said of the others. In the beginning of the course, Professor Gibson gave us three or four written lectures on inflammation, which led me to fear that the whole course was to be delivered in the same way, and by consequence, that I should be very little interested by the lectures. My disappointment, however, was of the most agreeable kind, when I afterwards found that he went through the whole course without having the slightest written memorial before him, and that his discourses flowed with a clearness, precision and energy, which can only be the result of a thorough acquaintance with his subject, as well as of a profound study of each particular topick discussed. His whole desire seems to be the conveyance of instruction, without allowing himself to wander in search of mere ornament, or striving to acquire popularity by making a display. The ease and propriety of his manner as a publick teacher give a lasting charm to his instructions, and the extreme attention he bestows on every thing that renders the subject clearer to the pupil, makes us all eager to catch every word offered for our consideration. There are some peculiarities in his mode of instruction which I will detail, as they are entirely original with him, and are so excellent that I have no doubt they will be speedily adopted by other teachers. The great number of them will give you a most convincing proof that he is ever trying to confer the greatest possible advantages on the class.

In treating of gunshot wounds, he illustrates all that is said by showing us the character of such injuries by shooting at the different parts of a subject, tracing the ball and exhibiting the peculiarities of the wound to the class. The superiority of this mode, over that of simply *talking* on the subject, is at once evident to all.

He does not content himself with giving us abstract notions of *dislocations*, by merely shewing the dry bones displaced, but by having the joints opened and dividing the ligaments, he displaces the bones in the various ways that we know to result from accident. Thus it has very nearly the exact appearance that the real injury would present, and we understand with facility the operations necessary to reduction.

In explaining the diseases of the eye, the class are assisted by highly magnified and beautifully coloured paintings, on a scale of two feet to each eye. The diseases of the antrum and nose are made plain by numerous drawings of the structure of the parts, as well as of the appearance of the diseases.

The subject of hernia is elucidated by immensely magnified and splendid paintings in oil, made from dissections for the purpose. This renders the ideas of the student at once clear and correct, as at the same time the disease is *imitated* on the dead subject by forming the tumour and sack, and the operation exhibited for its reduction. In a similar manner hemorrhoids, fistula in ano, hydrocele, schirrus testicle, and diseases of the urethra, are all imitated on the subject, and explained by the aid of magnified paintings. *Lithotomy, amputation*, and in short every operation in surgery, is thus made plain to the class by a multitude of ingenious contrivances and at a very considerable expense. As you have seen the splendid collection of wax models made by Professor Gibson himself, it is unnecessary to repeat to you that they are beautifully correct and of great value to the student.[6]

[6] We have tried to trace the whereabouts of William Gibson's paintings, drawings and models, but without success. Dr. W. B. McDaniel, 2d has called our attention to Blanton's statement in *Medicine in Virginia in the Nineteenth Century*, p. 55 (citing the Medical College of Virginia catalog for 1854–55), that Gibson's "fine surgical museum" became a part of the Medical College of Virginia's apparatus in 1855. This happened when William Gibson's son, Charles Bell Gibson, became professor of surgery and surgical anatomy at the college. The catalog of 1857–58 reads: "The illustrations in surgery have also been enriched by the addition of the cabinet of the late professor of surgery in the University of Pennsylvania, Dr. William Gibson—which contains very numerous specimens of surgical disease and injuries, paintings in oil admirably executed, and models in wax, procured at an expense of many thousand dollars—and is everywhere admitted to be unequalled as a surgical museum." The catalog of 1860–61 mentions the "Gibson Cabinet." However, the cabinet did not belong to the institution, but to C. B. Gibson. Thelma Hoke of the College found in the records the following note offering the cabinet for sale to the College: "June 26, 1865. To the Members of the Faculty of the Richmond Medical

There is one improvement of his, which deserves a particular mention, as it is of a very singular and highly instructive character. This is, the frequent introduction of the living subject on whom a great many operations are performed; such as washing out the stomach, as in cases of poisoning, by means of the gum elastick tube and syringe, the introduction of *Anel's* probe into the *puncta lacrimalia,* and of the catheter into the bladder, &c. all of which as they are to be performed on the living subject, are only to be understood when performed in this way. The class are under considerable obligations to this indefatigable teacher, for after giving us an opportunity of seeing him operate on private patients, others from the alms-house are frequently introduced to exhibit certain diseases, or their effects on the system.

During the winter he delivers a course of Clinical Surgery, at the alms-house, where patients are brought into the area of the operating room, the peculiarities of their cases described, and operations performed when requisite. Sometimes they are brought in on their beds, which enables all the pupils to see, without subjecting the patient to the inconvenience of a crowd immediately around his bed. This plan is also his, and he deserves our gratitude for the steadiness of his exertions for our benefit. He has performed the operation of lithotomy, three times in the alms-house within a few months, with entire success; and in all we have seen upwards of *thirty* operations by him this winter. The class in attendance at the alms-house during this session, has been 250; heretofore it has never exceeded 60. It is not difficult to foresee that in succeeding winters this class will become very much larger.

It strikes me that I have given you but a very hasty sketch of the peculiarities and advantages of this course, but you have enough to prepare you for appreciating the excellence of what you are to find here next winter. It is a fact that these things have not yet been done in any of the schools of Europe, and are only known in this country through the pupils of the University of Pennsylvania.

I make no apologies for this, as you know the little time I have for writing.

Ever your friend,

N. H-----.

P.S. I almost forgot to answer your query about the price of boarding. I pay three dollars; but very comfortable and respectable boarding may be had for $2 or 2.50 at all times.

College, Gentlemen: The Museum Medical and Surgical Cabinet of the late Professor Charles Bell Gibson is offered for sale. It is my desire, as I know it would have been his, that the College under your charge should become possessed of this collection, if in your opinion the acquisition shall be deemed desirable. It would afford me great pleasure to make this a free gift to the Institution, but circumstances beyond my power compell the sale:—the price to be assigned hereafter by a competent board of appraisers. Very respectfully, Your Obt. Servt., Ellen Gibson." But the College did not buy the cabinet. Richard A. Miller of the College library could find no mention of a purchase in the records. The Civil War was just over and probably the school was just about wrecked financially. Mrs. Gibson then offered the cabinet to anyone who would buy it. The *Index-Catalogue of the Library of the Surgeon-General's Office,* 2 series, Vol. 11, p. 251, lists the following sale catalog of Gibson's relics: "Descriptive catalogue of anatomical and surgical preparations in wax, papier mache, and leather, with a valuable and rare cabinet of original specimens of bones, illustrating an interesting series of diseases, casualties, and malformations; also a collection of oil paintings of anatomical and pathological subjects, by Sully. Collected by William Gibson, the property of the late Charles Bell Gibson, and now offered for sale at the museum of this college. [Richmond, Va.] 8°. [Richmond, Va., n.d.]" There the trail ends, at least for now. Perhaps someone will take up the search and locate William Gibson's models and paintings, some by the notable artist Thomas Sully.

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Memoir of Moses Behrend

1877–1969*

By J. GERSHON-COHEN, M.D., D.SC. (MED.)

Moses Behrend, internationally-known surgeon, died at his home in Philadelphia on November 15, 1969, in his 93rd year.

Born June 6, 1877, Doctor Behrend was the youngest son of a German immigrant furniture maker. During his boyhood, he was instructed in cabinet making with the idea that he would fulfill his father's desire to follow him in the trade, an idea the young would-be doctor resisted. When Doctor Behrend became a surgeon, he was grateful he had developed the manual dexterity of a furniture maker, for open bone surgery of the times required that the surgeon fashion his own dowels and bone screws to maintain alignment of fractures.

He was graduated from the Central High School of Philadelphia in 1895 and went directly into the University of Pennsylvania Medical School; premedical college training was not a requisite in those days. After receiving his M.D. in 1899, although internships were not compulsory, he took two, a first internship at the Jewish Hospital (now Albert Einstein Medical Center, Northern Division) and a second at Philadelphia General Hospital, before launching into general practice.

Since specialists were few, the young general practitioner found himself treating all ailments, including those in the categories of ophthalmology, obstetrics and general surgery. For 10 years he performed eye operations under the guidance of Doctor P. N. K. Schwenk at the Wills Eye and Pennsylvania Hospitals and credited this experience with developing the delicacy of touch he found so useful when he devoted himself exclusively to surgery beginning in 1911.

The influence of Doctor John B. Deaver helped shape his decision to become a surgeon and to sharpen his surgical technique. He studied under the master for four years at the University of Pennsylvania School of Medicine and observed Doctor Deaver for 10 years at the Deaver Clinic of the German (now the Lankenau) Hospital.

Doctor Behrend became a pioneer in thoracic surgery, serving as thoracic surgeon to the State Hospital at Hamburg, Pa., to St. Agnes Hospital in Philadelphia, and to the Philadelphia General Hospital, where he organized the thoracic surgery unit and was Chief of Surgery from 1930 to 1946.

Among the milestones of his long and distinguished career were his elections to the presidencies of the Philadelphia County Medical Society in 1926 and the Pennsylvania State Medical Society in 1933. He was a Fellow of the American College of Surgeons and of the International College of Surgeons. He was a member of the latter's Board of Governors and Honorary Chairman of its Qualification Board.

Honors were conferred upon him by the surgical societies of Mexico (1941), Havana (1948), Buenos Aires (1950), Italy (1951), Madrid (1952), India (1954), Japan (1954), Bangkok (1954), Osaka (1954), Bombay (1954), São Paulo (1954), Rio de Janeiro (1954) and Peru (1954).

He held many academic posts, among them Attending Surgeon to the Jewish Hospital (1913–48), Consultant Surgeon to the Albert Einstein Medical Center (1953–69), Attending Surgeon to Mt. Sinai Hospital of Philadelphia, now Daroff Division of the

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Albert Einstein Medical Center (1923–48), Instructor in Anatomy, Jefferson Medical College (1941–54), Attending Surgeon, Northern Liberties Hospital of Philadelphia (1930–5), and Honorary Associate in Surgery to Jefferson Medical College (1963).

In addition to his accomplishments as a brilliant surgeon, physician, teacher, and lecturer, Doctor Behrend was also an author. He published more than 150 papers on surgical subjects and a textbook on *Diseases of the Gall Bladder and Allied Structures* in 1947.

Doctor Behrend married his cousin, the former Clara Rosenbaum, in 1905 and fathered three children: a devoted son, Albert, now a well-known Philadelphia surgeon; Jeanne MacManus, editor and acclaimed concert pianist; and Ruth Hagedorn, writer of short stories and magazine articles, harpist, and painter. He was blessed with eight grandchildren and many great-grandchildren.

It is a measure of his giant stature that he filled his long life with solid achievements, joyous intensity, devoted friends, and the towering respect of his colleagues. He regarded himself as a fortunate man; and those who knew him considered themselves privileged to be counted among his friends.

My own friendship with Moses Behrend goes back some 45 years, when I first met him as a medical assistant at the Jewish Hospital. As one of his interns, I shared with many others of his students and assistants the thrilling experiences of his operative genius. One can never forget the excitement of his surgical virtuosity in the Saturday surgical clinics, when he would customarily operate on from 10 to 15 patients in succession.

I shall never forget an incident on the first day of my intern service with him. He removed the appendix of an 8-year-old boy, completing the entire operation in the time it took me merely to scrub my hands in preparation for surgery.

Later, when I became a senior member of the staff of the Albert Einstein Medical Center, it was always a joy to partake of his consultative wisdom, gained from long matured experience. I share with a great host of colleagues and friends a sense of deep loss at his passing.

Memoir of Edward L. Bortz

1896–1970*

By J. MONTGOMERY DEAVER, M.D.

Edward L. Bortz, M.D., of Bala-Cynwyd, one of the nation's leading authorities on geriatrics, died on February 24, 1970, at The Lankenau Hospital. He became a member of The College of Physicians of Philadelphia on January 12, 1931. A graduate of Harvard University and Harvard University Medical School, he served a two-year internship at Lankenau Hospital, followed by graduate work at Mayo Clinic, University of Vienna, University of Berlin and University of Illinois Medical School. A member of the Lankenau Medical Staff for 44 years, he served as Chief of Medical Service "B" for three decades; he was senior consultant in medicine and consultant to the hospital's research project on aging at the time of his death.

Dr. Bortz was a past president of the American Medical Association (1947–8), the American Geriatrics Society (1960–1) and the Philadelphia County Medical Society (1940–1). He was one of the founders of the World Medical Association. He was a member of the White House Commission on Aging and served as a panel chairman at the recent White House Conference on Food, Nutrition and Health. He was certified by the American Board of Internal Medicine in 1937.

Dr. Bortz was the author of more than 100 articles on nutrition and geriatrics and of the book *Creative Aging,* for which he won an award of the American Medical Writer's Association. The association also gave him an award in 1961 for outstanding contributions to medical literature.

For many years he was assistant editor of *The Cyclopedia of Medicine, Surgery and Specialties.* He wrote *Diabetes* in 1936 and was the translator in 1928 of the Viennese Dr. A. I. Cemach's *Surgical Diagnosis in Tabular Outline for Students and Physicians.* He was editor of the Geriatrics Digest from November 1967 until his death.

During World War I, he was a pilot in the U. S. Army Air Corps; in World War II he was a captain in the U. S. Navy Medical Corps, serving with the Marines on Iwo Jima and in the atomic bomb area of Nagasaki, Japan.

He was an active member of the Philadelphia Orchestra Association, The First Presbyterian Church in Philadelphia and the Union League.

He is survived by his wife, the former Margaret Welty, a son, Walter M., who is also a physician on the Lankenau staff, and four grandchildren.

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Memoir of Harry D. Evans, Jr.

1911–1969*

By HERBERT P. HARKINS, M.D., M.SC. (MED.)

Harry D. Evans, Jr., a Fellow of The College of Physicians of Philadelphia, died at his home in Greenville, South Carolina, on October 21, 1969.

Dr. Evans was born in Atlantic City, New Jersey, on February 26, 1911, but spent most of his childhood in the Philadelphia area. He was graduated from the Friends Central School in June 1929 and received his pre-medical education at Villanova College. In June 1936, he was graduated from the Hahnemann Medical College.

The following year was spent in internship at the Hahnemann Hospital of Philadelphia.

The years from 1937 to 1940 were spent in the general practice of medicine, and from 1940 to 1944 he pursued post graduate training and a preceptorship in obstetrics and gynecology. In 1946 he was certified by The American Board of Obstetrics and Gynecology, and he later became a Founding Fellow of the American College of Obstetrics and Gynecology. Dr. Evans was elected to Fellowship in The American College of Surgeons in 1948.

Later Dr. Evans was made Associate Professor of Obstetrics and Gynecology at Hahnemann Medical College and served as Senior Attending Obstetrician and Gynecologist to the Hahnemann Hospital of Philadelphia.

From 1946 to 1958, Dr. Evans was associated with Dr. Newlin. F. Paxson in the practice of obstetrics and gynecology.

In late 1958 he became Medical Director of the Davis and Geck Division of the American Cyanamid Corporation, retiring from this position in 1968.

Dr. Evans was a member of the Philadelphia County Medical Society, the Pennsylvania Medical Society, and the Obstetrical Society of Philadelphia. He was a Vestryman of the Memorial Church of St. Paul in Overbrook, Philadelphia.

In June 1934, Dr. Evans married Louise F. Jones and they have two sons, Louis J. Evans and Harry D. Evans, III, and two grandchildren.

Harry D. Evans, Jr., was a devoted physician and father and was always concerned for the welfare of his patients and family. During his lifetime his endeavors were carried out in the best tradition of medical practice and service, and he will be greatly missed by his family, his patients and his friends.

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Memoir of C. Calvin Fox

1892–1969*

By THOMAS K. RATHMELL, M.D.

C. Calvin Fox, M.D., died September 29, 1969, at 77 years of age. Dr. Fox was born in Alderson, Pennsylvania, in 1892. He was the son of Richard and Adeline Fox.

As a boy he was bright, ambitious and polite. During his elementary years he worked in a country store. His education was continued at the Wyoming Seminary, at the University of Maine to which he received a scholarship, and the Jefferson Medical College, from where he was graduated in 1918. He was a poor boy and received financial help for his education from a local coal baron. Dr. Fox had a tall, lanky physique. During his college years, he worked as a forest ranger in Maine and became a recognized track athlete at his university. He pitched for the Detroit Tigers and met the great Ty Cobb. These athletic experiences were used as entertaining stories for his children in later years.

Dr. Fox was a member of the Beta Theta Pi and Phi Alpha Sigma Medical Fraternity. After serving an internship at the Germantown Hospital, he became Chief Resident at Wilkes-Barre General Hospital, 1920.

In 1921 he married Evelyn Reed from Portsmouth, Ohio. Two daughters were born from this union.

He was an assistant to Dr. Warren B. Davis in the Department of Otolaryngology at Jefferson and became Clinical Professor of Otolaryngology in 1956. Several papers in this field were published by Dr. Fox.

Appointments to other institutions in the Philadelphia area were held by Dr. Fox. He was a member of the Philadelphia County Medical Society, Philadelphia Otolaryngological Society, American Academy of Otolaryngology, American Medical Association, Medical Club of Philadelphia and The College of Physicians of Philadelphia. He was a diplomate of the American Board of Otolaryngology.

Dr. Fox retired in 1969. To his contemporaries he was known as a good student and an excellent teacher. His wife died in 1946. He is survived by two sisters and two daughters, Miss Janet E. Fox of Chicago, Illinois, and Mrs. Chester E. McAfee, Meadowbrook, Pennsylvania, and four grandchildren.

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Memoir of Alvin W. Howland

1902–1969*

By WARREN S. REESE, M.D

Alvin Wilcox Howland died suddenly on October 26, 1969, in an airplane, about two hours out of New York, while en route to a world-wide medical seminar in Greece. His body was removed at Amsterdam, Holland, and flown back to the United States. He lived at the Kenilworth Apartments, Germantown, Pa.

Dr. Howland was born in Adrian, Michigan, on September 12, 1902. He received an A.B. degree from Adrian College in 1925 and an M.D. degree from the University of Michigan in 1929. From 1929–30 he interned at Harper Hospital, Detroit, and from 1930–2 served a residency in ear, nose and throat at the University of Iowa, having originally intended to join his father, an eye, ear, nose and throat specialist. He then came to Philadelphia and enrolled in the 1932–3 course in ophthalmology at the Graduate School of the University of Pennsylvania.

In 1933, he was appointed Resident Surgeon at the Wills Eye Hospital, and so impressed our famous and far-seeing superintendent, Stephen Wierzbicki, that he was made the first Chief Resident, and served in this capacity from May 1935 until May 1937. During the latter year he became a Diplomate of the American Board of Ophthalmology and entered practice with the late Dr. J. Milton Griscom, who had him appointed Clinical Assistant, and two years later, Assistant Surgeon on his service in Wills Eye Hospital.

Dr. Howland entered the United States Army in 1942 and, after serving as Chief of Ophthalmology in Army Hospitals in the United States and Japan, was discharged in August 1946 with the rank of Lieutenant Colonel.

Following discharge, he returned to private practice, and became Assistant Surgeon to the late Dr. Isaac Tassman and, when the Staff was reorganized, was given a similar position with Dr. Patrick J. Kennedy.

In addition to the Wills Eye Hospital, he served as Ophthalmologist to the Underwood Hospital in Woodbury, New Jersey from 1935 to 1955, and was then appointed Consultant. For a time, he also served on the Staff of the Jefferson Medical College.

Dr. Howland held membership in the Philadelphia County Medical Society, the Pennsylvania Medical Society, the American Medical Association, The College of Physicians of Philadelphia, the Ophthalmic Club of Philadelphia, the American Academy of Ophthalmology and Oto-Laryngology, the American College of Surgeons, and the Wills Eye Hospital Society of which he was a former president.

His clubs included Philadelphia Cricket, Vesper, Skytop, Chesapeake Yacht, Philadelphia Racquet, and the Philadelphia Aviation Country Club.

He was mechanically minded, dextrous, and interested in automobiles, boats, recorders, hi-fi and stereo, the latter indicating his love for music. He was also interested in gardening and photography.

Dr. Howland married Miss Nancy Phillips on April 7, 1938, from which union came three children, Mrs. Freeman L. Johnson, Courtney Wharton Howland and Nancy Lyle Howland. He was an ideal husband and father, equally devoted to his profession and family, and joined his children in all their activities.

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From a professional standpoint, he was most interested in his patients and in teaching, having taught in the Graduate School most of his professional life and for six years at Jefferson Medical College. He was especially interested in the Wills Eye Hospital residents, this possibly having been inculcated in him when he was a resident at a time when their emoluments were not to be compared to what they are today.

During his Army service, he earned an enviable reputation as a morale builder among his many patients at the Atlantic City General Hospital, many of whom were blind. While in Japan, he was on General MacArthur's Staff, and during that time he operated on the Peruvian Commander-in-Chief successfully and was given an award. Few ever heard of this; indeed, I learned of it only recently.

Therefore, it may be said that Dr. Howland was humble and humanitarian, two wonderful accolades for a physician, and, as stated in the Wills Hospital Staff Resolutions of November 12, 1969, he will be sadly missed by his friends, colleagues, and residents of that institution, and I have not the slightest doubt, by an infinitely larger number of patients.

Memoir of Henry Bittinger Kobler

1878–1970*

By EUGENE P. PENDERGRASS, M.D.

Henry Bittinger Kobler was born in Adams County, Pennsylvania, on August 28, 1878, and died on Tuesday, June 3, 1970, in the Germantown Hospital, at the age of 91.

Harry Kobler's parents were Lewis W. and Flora Mehring Kobler. He was one of five children. He received his public school education in his native town of Hanover, Pennsylvania. After graduation from high school, he attended the Medico-Chirurgical College, Philadelphia, Pennsylvania, and was graduated in 1899.

Harry was married to Miss Mae Rosenberger in 1910. She died in 1935. There were no children. On November 24, 1948, Harry married a close friend of his former wife, Charlotte Rosalie Lembert Crawford, widow of Daniel Crawford, the well-known builder of the Crawford homes of Philadelphia. Surviving are his wife, Mrs. Charlotte Crawford Kobler, her daughter, Mrs. Myrtle Pugh; eight grandchildren, nine great-grandchildren, all of whom are members of Mrs. Crawford Kobler's family; and his sister, Mrs. Violet Beatle, who is 94.

Harry began general practice in the fall of 1899 in West Philadelphia at 658 North Sixty-third Street, Philadelphia, Pennsylvania. In December 1965, after 66 years of a very busy and large practice, he retired and sold his wonderful home and office.

After completing his third year of medical studies, Harry was assigned to assist in transporting soldiers to Philadelphia for treatment of typhoid fever contracted in the Spanish-American War. He made several trips from Key West to Philadelphia, attending the soldiers in crude bunks in wooden box cars. There was no medication and the only food was vanilla ice cream. The toilets and other facilities were quite primitive.

He served as Chief of Obstetrics at the Roosevelt Hospital, Philadelphia, from 1910 to 1942, when that hospital was merged with the Samaritan Hospital. He also served as Assistant Surgeon to Dr. A. B. Webster at the Hahnemann Hospital for 30 years. That gave him special training in general surgery, which further developed him as a general practitioner. In addition, he served on the Courtesy Staff at the Woman's Hospital in West Philadelphia from the time of the beginning of its foundation in 1900, and also at the Delaware County Hospital.

He became President of the West Philadelphia Medical Society when the Charter was first granted in 1920 and served for two terms. He was one of four physicans who formed the West Philadelphia Medical Association in 1900. Later those two organizations held their meetings jointly. He became a member of the Medical Club of Philadelphia in 1917 and has served on the Board of Directors from 1920 and 1939, and later on as its President. He was elected a member of the Academy of General Practice in 1941 and a Fellow of The College of Physicians of Philadelphia in 1948.

He served on the Board of Directors of the Philadelphia County Medical Society from 1942 to 1949, and as President in 1950. During his presidential year, he emphasized programs which were particularly of interest to the general practitioner.

He was a member of the American Medical Association, Pennsylvania State Medical

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Society, the Board of Pennsylvania State Medical Research, Doctor's Golf Association, Physician's Motor Club, the Penn Club, the French Huguenot Society, Pennsylvania German Society, Upsilon Phi Chi Fraternity, the Union League and the Overbrook Presbyterian Church. He was a Mason and a Shriner.

In 1950, Harry had the responsibility for the medical services of 20,000 Boy Scouts at Valley Forge. It was on June 11, 1959, that his dedicated medical service to the people and community of Philadelphia was recognized by a personal letter from President Dwight Eisenhower. That letter has been framed and hopefully some day it will hang in an appropriate place for all to see.

Harry Kobler was a man of many talents. He was a "born physician" and general practitioner; he was loved by his patients, and he was admired and respected in the community. His office secretary said he was a top diagnostician, that he knew what was wrong with a person by just looking at him; that "he delivered thousands of babies at the West Philadelphia Woman's Hospital and at the Salvation Army Hospital in West Philadelphia where he attended the unwed mothers in their care." He was physician to the Ice Hockey Team for nine years.

Being a native of Hanover, Harry early became interested in the celebrated Hanover pacers and trotters. It is said that he did some racing. He drove his own horse and buggy, and was known to take over and drive the horses on the horse cars of Philadelphia while the driver caught up on lost sleep.

Harry was a great dog fancier. He was well known all over the United States and Canada as a judge of real ability and his decisions were held in great respect and esteem. Mr. George Butz, of the Philadelphia Inquirer, who writes "Barks from Dogdom," sent me two valuable clippings from his library. Mr. Butz looked on Harry as a most sincere friend and said that Dr. Kobler "was literally father to me after the death of my own dad in 1934."

Harry raised cocker spaniels and there always were two cockers in his office. His abilities as a judge were in all classes but he often was selected to be a 'Judge of the Best of the Show.' That position he filled with real ability.

In concluding these vignettes of a man who loved people and animals, it is fitting to recall Harry's amazing memory of poetry and anecdotes. He could always select something appropriate to say at the right time and the right place. He always was a gentleman.

Harry has served well in the vineyards of General Practice, community service, organized medicine and other important areas including a full measure of social and club activities.

On many occasions the success of Harry Kobler's social and other responsibilities were undergirded successively by the guidance and influence of each of his wives. Those who knew them can testify that their charm and devotion were a continuing source of happiness and great inspiration to Harry Kobler. Their team program was effective and its contributions will always serve well as a good platform on which to build a better environment in which to live.

Memoir of Albert A. Lucine

1895–1969*

By JACOB H. VASTINE, 2ND, M.D.

Albert A. Lucine, M.D., was born on September 22, 1895 in Arabkir, Armenia. When he was nine years old, he and his mother immigrated to the United States, settling in Philadelphia. He attended public school in Philadelphia and was graduated with honors from the Central High School. Throughout his youth, he worked in various capacities to support his mother and to further his education. He attended Temple University where he received his medical degree in 1921. He interned at the Chester County Hospital in West Chester, Pennsylvania. Following his internship, he had the benefit of the broadening experience gained by several years of general practice. He then specialized in general surgery and was elected a Fellow of the American College of Surgeons in 1933. He was elected a Fellow of The College of Physicians of Philadelphia in 1960. He was a member of the Surgical Staff of the Roxborough Memorial Hospital for many years. He was Associate Professor of Surgery at the Woman's Medical College of Pennsylvania.

Dr. Lucine was a member of a number of medical organizations, including the American Medical Association, the Philadelphia and Pennsylvania State Medical Societies, the Medical Club of Philadelphia, the Philadelphia Academy of Surgery, the American College of Surgeons, and The College of Physicians of Philadelphia.

Most of his professional life he maintained an office at 345 South 19th Street where he enjoyed a large private practice.

On September 26, 1925, he married Grace Wright with whom he shared 44 years of happiness, the last 26 years in their 19 wooded acres in Penn Valley with a large stone house, a stable with several horses, attractive landscaping and a swimming pool. His hobbies were his home and his family. In this peaceful rural setting, he and Mrs. Lucine raised two sons, of whom they are justly proud. Both boys followed in their father's footsteps. The older son, Albert Lucine, Jr., was graduated from the University of Pennsylvania School of Medicine in 1951 and interned at the Presbyterian Hospital. He was a resident at the Pennsylvania Hospital and subsequently specialized in obstetrics and gynecology and is on the staffs of the Pennsylvania, Chester County and Paoli Memorial Hospitals. The younger son, Andrew Lucine, was graduated from the University of Pennsylvania School of Medicine in 1954 and interned at the Presbyterian Hospital. He received his training in surgery at the Presbyterian Hospital and the Lahey Clinic, subsequently specializing in general surgery. He is now practicing in San Jose, California.

After a long and distinguished career, Dr. Lucine met his untimely and tragic death on October 9, 1969 in an automobile accident in which his car was struck on the side at an intersection on West Chester Pike. He died at the Chester County Hospital in West Chester, where he began his medical career as an intern almost 50 years earlier.

He is survived by his wife, Grace, their two sons and their wives, and five grandchildren. His passing will leave a void in the lives of his family, his confreres, his many friends and a legion of grateful patients.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Louis Merves

1912–1969*

By BENJAMIN HASKELL, M.D.

Louis Merves, M.D., was born in Philadelphia on August 16, 1912, and it was in this city that he grew up and spent most of his professional career.

Following graduation in 1933 from Tufts College, *summa cum laude,* he entered Jefferson Medical College and received his diploma in 1937. There followed a two-year internship at the Jefferson Hospital, after which he was appointed a McCrae Fellow in Medicine, 1939–41. The next year was spent at the Harvard Graduate Medical School for further training in cardiology.

Before he could establish himself in practice in Philadelphia, World War II intervened and he entered the service as a Captain, becoming ward chief at O'Reilly General Hospital in Springfield, Missouri. Most of his war service was spent with the 57th Station Hospital in Morocco as chief of the cardiovascular section, and he was discharged as a Major in November 1945. Upon his return to Philadelphia, he was appointed to the staff at Jefferson in the Department of Medicine, where his primary interest was cardiology. He became Assistant Cardiologist in 1951 and gradually advanced through the ranks to become Associate Professor of Medicine in 1965. He was a member of a number of societies in his special field and a Fellow of The College of Physicians since 1956. Louis Merves was highly respected as a physician by his colleagues and patients. He was always enthusiastic about his work, kind and considerate to those who sought his help.

In 1948 Louis Merves married the former Rose Hofkin. Two fine sons graced this marriage and to them he was a devoted father.

Recurrent bouts of a chronic illness confined Lou to his bed or home for considerable periods but he did not complain, and his outlook on life was never embittered. He was a perfectionist and sought to correct things when they were not right. He endeavored to develop in medical students and residents sound thinking and high standards of clinical practice. These standards carried over in his relationship to the institution to which he was so loyal for so many years. When circumstances required it, he did not hesitate to speak up, to criticize and to offer pertinent and constructive comments.

In his later years his recreational activities were limited and his greatest enjoyment was to have dinner and good conversation with a small group of friends at his home. His pungent wit and down-to-earth philosophy enlivened these gatherings.

Louis Merves died on May 28, 1969. Those with whom he came into close contact are the richer for having known him.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Joseph Walter Post 1887–1969*

By J. STAUFFER LEHMAN, M.D.

It is my special privilege to write this memoir of one of Philadelphia's most beloved radiologists, "Joe" Post.

This man was of medium height and average proportions, but his stature in Philadelphia medicine was of large dimension. Joseph W. Post was born in Trenton, New Jersey, on May 14, 1887, one of a family of six children. His elementary education was obtained in Ardmore, Pennsylvania, and his secondary education in Trenton, New Jersey. In the fall of 1905 he entered Hahnemann Medical College and was graduated in its Class of 1909.

Following an internship at Hahnemann Hospital, he held the position of Chief Resident at St. Luke's Hospital for one year and entered into general practice in North Philadelphia while continuing to serve as Assistant Surgeon on the dispensary staff of St. Luke's.

When the United States became embroiled in World War I, Dr. Post enlisted and was commissioned a First Lieutenant in the Army Medical Corps. In December 1917 he was assigned to the Army X-ray School at Camp Greenleaf, Tennessee, and, after a period of three months in radiology, he was transferred to a similar school at Cornell Medical College, New York City, being graduated in July 1918 with the highest average recorded for the special courses in radiologic schooling.

Dr. Post was then ordered to France, where he served as Chief of the X-ray Sections in mobile and base hospitals at Longchamps and Pagny, seeing service in the San Mihiel and Argonne drives. Following an attack of epidemic influenza and pneumonia, Dr. Post was assigned as Company Commander to a convalescent camp in France. The Army Disability Board then ordered his return to the United States, where he received an honorable discharge from military service in May 1919.

In the fall of 1919, Dr. Post began the private practice of roentgenology and was appointed Associate Roentgenologist to the Children's Homeopathic Hospital of Philadelphia. Shortly thereafter he moved his offices from West Erie Avenue in North Philadelphia to the Medical Arts Building in Central Philadelphia. From 1930 to his retirement from full practice in 1966, he maintained his private practice of Roentgenology at 1930 Chestnut Street. Along with this private practice, Dr. Post was Chief Roentgenologist at St. Luke's Hospital until 1956 and Consulting Roentgenologist to several other hospitals.

This busy physician also found the time and energy to engage in medical academic affairs, holding appointments on the faculty of the Hahnemann Medical College and of the Graduate School of Medicine of the University of Pennsylvania. For a number of years (1952–63) he was a member of the Board of Trustees of the Hahnemann Medical College and Hospital and served as its Secretary from 1957 to 1963. A certificate of merit was awarded him by the Alumni Association of his Alma Mater. In 1959, he was acclaimed National Physician of the Year. In 1963, at the Eastern Conference of Radiologists, a special citation was given to Dr. Post for his contributions to medicine and radiology.

Dr. Post's activities were numerous and varied. He early evinced an interest in

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public relations and in medical economics and headed a number of commissions and committees of the Philadelphia County Medical Society. He served as vice president of that society and was its president in 1952.

He was president of the Philadelphia Roentgen Ray Society, and a Fellow of The College of Physicians of Philadelphia, the American College of Physicians, the American College of Chest Physicians and the American College of Radiology. One of his principal interests was the training of radiologic technologists, and he was founder of the rather unique Philadelphia Plan for the establishment of the School of X-ray Technicians conducted by the Philadelphia School System under the aegis of the Board of Education.

Joseph Walter Post was a man who devoted his entire professional life to interests which are the essence of good medical practice: devotion to his patients and their well-being, reverence for the ideals of his profession, the training of those who carry forward the work of his profession, and the organized advancement of medicine.

Joe Post is well remembered and revered by his many friends and confreres. His death in June, 1969, has left a signal void in the ranks of the leaders in medicine.

Memoir of Manuel Sall

1906–1969*

By ANTHONY S. TORNAY, M.D.

It is with sincere regret that we have to record the death of Manuel Sall, M.D., on December 17, 1969. He was born in Philadelphia on August 5, 1906. He was raised in West Philadelphia. He was graduated from the West Philadelphia High School in 1924 where he was known to be a serious, earnest student. After he left high school, he entered Lehigh University and was graduated in 1928. He attended Hahnemann Medical College and received his medical degree in 1932. He did extremely well at Hahnemann and served as an intern at Hahnemann Hospital in 1932 and 1933. He then went to the Allentown State Hospital for four months preparatory to entering the Graduate School of Medicine of the University of Pennsylvania from 1933 to 1935. It was here that he came under the influence of three of the really great teachers of neurology, the late Clarence Patton and Joseph C. Yaskin and also Bernard Alpers. As a result, he was a well-rounded neuropsychiatrist. He was boarded in neurology and psychiatry in 1942.

When he finished his training at the Graduate School, he was asked to work in the Out-Patient Department of the Philadelphia General Hospital. He organized the Epilepsy Clinic of the hospital and left the clinic to enter the U. S. Army in April 1943. He served as a major in the medical service of the army as Chief of Neurology and Psychiatry at Camp Hale in Colorado. He also served in similar capacities at the DeWitt General Hospital at Auburn, California, and the Letterman General Hospital in San Francisco. It must also be noted that he was Chief of Neurology at Woman's Homeopathic Hospital from 1938 to 1949. Other staff appointments included a chiefship at the Philadelphia Psychiatric Center, membership on the neurologic staff at the Orthopedic Hospital from 1935 to 1940 and membership on the staff at the Graduate Hospital from 1936 to his death.

As a teacher in the Graduate School of Medicine, he was well liked by both the students and the faculty. He was named Associate Professor of Neurology and Psychiatry in 1956.

He belonged to many medical organizations besides being a Fellow of The College of Physicians of Philadelphia. He was for years the treasurer of the Philadelphia Neurologic Society. Among some of the other organizations he belonged to were the American Medical Association, Academy of Neurology, Philadelphia Psychiatric Society, Philadelphia County Medical Society and Pennsylvania Medical Society.

He was married to Alice Loffink, a registered nurse, in 1939. She passed away in 1968 of a coronary thrombosis. This happy union was blessed with five children, four sons and one daughter. His oldest son, David Leonard, is a physician, a resident at the Institute of the Pennsylvania Hospital; George Edward is a stockbroker; Michael Lewis is a student at Temple University; Jane Sall Perlman is the proud mother of one son; and Robert is a student at Pennsylvania State University.

He later married Judith Stromm DeWitt, who had three sons by a previous marriage, so that at his death he had a large family.

Some months before his death he developed a cough. He had a chest X-ray and found that he had an inoperable carcinoma of the lung. He died at the Graduate Hospital on December 17, 1969.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Albert Carl Sautter

1878–1966*

By ELIZABETH B. SAUTTER

Albert Carl Sautter, M.D., was born in Philadelphia on May 3, 1878 and died November 13, 1966.

He was a graduate of the University of Pennsylvania School of Medicine and studied for several years in Vienna.

When elected a Fellow of The College of Physicians of Philadelphia on March 4, 1908, he was ophthalmic surgeon to Germantown Hospital and maintained an office in the Germantown Professional Building. He served also on the staffs of the Hospital of the University of Pennsylvania and Lankenau Hospital. He was a member of Alpha Sigma Medical Fraternity.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Creighton H. Turner

1882–1968*

By ROBERT I. WISE, M.D., PH.D.

Born in Montoursville in the Loyalsock Valley of Pennsylvania in 1882, Creighton Hooker Turner attended the common schools of Lycoming County, was graduated from Muncy Normal School in 1903 and obtained a Teacher's Permanent Certificate for the public schools of Pennsylvania in 1904. He left his teaching position in Lycoming County to enroll at the Jefferson Medical College, from which he was graduated in 1909.

After serving two years as a resident physician at the Jefferson Hospital, he became Chief Resident Physician, then Instructor in Medicine and eventually Associate Professor of Medicine at the Jefferson Medical College.

Soon after finishing his formal medical training, Dr. Turner entered into a happy association with James C. Wilson, M.D., the first Magee Professor of Medicine, and assisted in the preparation and publication of Dr. Wilson's *Medical Diagnosis* and *Medical Pocket Formulary*. This friendship had a great effect on the young physician, and through Dr. Wilson he learned to know Dr. William Osler, Dr. S. Weir Mitchell and other great medical leaders of the time. He taught and was able to teach others the important precepts of the physician. He loved the Department of Medicine of the Jefferson Medical College. He appreciated its weaknesses and its strengths. He held the highest respect for what was right and good and detested superficiality and insincerity.

Among his medical activities were the following: Chief of the Outpatient Department, St. Agnes Hospital, for 11 years; Chief of the Medical Service, St. Agnes Hospital, for 25 years; physician to the medical clinic of Jefferson Hospital for 25 years; Associate of the American College of Physicians; Fellow of The College of Physicians of Philadelphia; Alpha Omega Alpha; Chairman of the Nurses Training School Committee of the St. Agnes Hospital for 10 years, Chairman of St. Agnes Clinical Society for 10 years. He was certified by the American Board of Internal Medicine in 1937. In 1959 he received citations for his 50 years of medical service by the Pennsylvania Medical Society and the Philadelphia County Medical Society. His office at 1731 Pine Street in Philadelphia was the place where many sought his aid and encouragement.

During the years of productive service, he enjoyed the wonderfully happy years of marriage to Mattie Allen Turner and their children, John Creighton Turner and Nancy Louise Turner Reddy. His mannerisms were unique, the gentle poke of his elbow to emphasize a point, the expressive notes and letters to his friends, his love of his "park" in Villanova, the garden in which he nurtured his trees and flowers. His life was truly one of service, for he loved all forms of life, his beloved patients, his animals, his plants, and to all he gave with devotion and generosity.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

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President's Address: The College of Physicians of Philadelphia*

By GEORGE I. BLUMSTEIN, M.D.

THE Bylaws of the College require that the President give the Fellows an annual report of his stewardship at its January meeting. Changes in the Bylaws are being contemplated that would permit the President to project his program to Council at its opening session in the fall and report its accomplishments at the end of each term of office.

The transition from one administration to another is made so smoothly because of the excellent rapport that exists within all branches of the College's family and by virtue of the fact that the incoming President has been well indoctrinated by having served his predecessor for a term as Vice President so that a new regime is merely a continuation of the old. The College has been most fortunate in its selection of presidents in that each previous one had the wisdom to diagnose clearly the College's major needs and the ability to supply them.

Dr. Francis C. Wood's legacy to the College was in recognizing the need for a master plan and for a full time and loyal administrative staff to implement it. An abstract of the blue print for the future (Berry Report) prepared during his reign was set forth recently to the Fellowship in a Presidential Letter. It will require many years of hard work by the Fellows and their officers to accomplish its major premises, but this administration accepts the challenges contained therein and dedicates itself to their fulfillment.

These are difficult times for institutions as old as the College, for they find themselves engulfed in a rapidly changing society that makes it obligatory for them to alter their aims and purposes with the times, making certain that they are necessary and relevant to the needs of the community they serve. A perusal of our ordinances and procedures made it obvious that many are carry-overs from a previous era and relatively inefficient. No longer can we rest on our laurels as the possessor of one of the greatest medical libraries in the land, for in this respect we have cast our fate with the National Library of Medicine by becoming its affiliate as the Mid-Eastern Regional Medical Library and are beholden to it for implementation of its program. Library services of the type once obtainable only by Fellows of the College are now available through the regional program to any physician affiliated with a hospital or medical school through their respective libraries.

* Annual Report of the President, The College of Physicians of Philadelphia, 6 January 1971.

Thus, our greatest asset has become a public trust for expanded services to the allied health fields and demands a reappraisal of our assets. And here I am reminded of a story related by one of our prominent Fellows, Dr. Isadore Ravdin, who at various times in his illustrious career served as a member of both the medical board and board of trustees of a hospital and could never decide which one was really the most important. As he was contemplating his theme as the principal speaker for the dedication of a nurses home, it suddenly dawned on him that neither of the boards was really as essential as he had assumed, for in reality the hospital could operate without either but could not function at all without the nurses. With this type of logic it follows that the Fellowship is our principal resource, for without it there would be no College.

There is little doubt that within our Fellowship rolls we have the outstanding teachers, investigators and practitioners from the medical profession and schools within this area. As more and more faculty appointments are being made to younger men, many of whom have higher degrees in their special fields of interest, it becomes evident that we must modify and broaden our focus if we are to interest them; in particular, it should be geared to attract the younger members within the allied health professions. The main thrust of this administration's efforts during the past year was devoted to making modifications that would permit continued growth and vibrant participation in medical affairs at all levels as it affects the professional and lay communities. Within this context I would like to relate what is being done or contemplated in furtherance of this program.

Before undertaking any new program, it became necessary to change the rules under which we operated to conform to our practices. This necessitated a modification of our Bylaws, a task that was entrusted to a committee consisting of Dr. Louise Gloeckner, Chairman, with Drs. Esmond Long and Robert Pressman as members. One of the first problems brought to their attention by the Fellowship Committee was the inordinate amount of time required to process and admit an applicant. I am happy to report that this procedure has now been revised and may be accomplished within a three month period, a far cry from previous practices that often required nine months to execute. At present, they are modifying the Bylaws to permit members of the allied health professions to become Fellows of the College with all the privileges thereof. Consideration is also being given to altering the term of office from a calendar year to a July 1 to June 30 one so it would parallel our fiscal year and scientific programs which are geared to the academic year. Steps are also being taken to assure rotation of committee appointments by limiting the time a member may serve on any single committee. To further broaden the base for participation, your President increased the size of committees to the greatest possible extent consistent with maintaining interest and efficiency and appointed Fellows to no more than a single committee. To fill as many of these positions as possible, younger men were sought, appointments often being made to Fellows who had just been indoctrinated.

The interests and capabilities of our constituents are presently being inventoried by a questionnaire that will bring our records up to date and become a valuable resource by which we can identify Fellows with special skills and/or interests for committee assignments.

In an unprecedented move, a group of younger Fellows was permitted to arrange one of our scientific meetings and will be accorded the privilege of introducing the guest speaker.

Council has also seen fit to authorize the appointment of several new committees to

explore the role that the College might play in solving the drug abuse problem and in establishing at the College a chair in medical history that would serve all five medical schools.

While we continue these innovations, there was also the need to up-date present programs. Towards this end, the Franklin Institute dinner on October 3, 1970, was an attempt to supply a social program that many of our members seem to want. A Fellowship room where we can meet colleagues from other institutions or spend a few restful hours perusing some of the more popular periodicals is high on our list of priorities and something we hope to establish within the foreseeable future. A library package of a type not available through local medical libraries is now being readied. It is contemplated that a special librarian available only to Fellows will be at our disposal to help expedite our needs. A booklet of tickets redeemable for special types of library services will be distributed during the next calendar year and will contain parking vouchers, one for each of the principal scientific meetings, that will permit Fellows to park *gratis* at selected sites.

With your continued support, I am certain that the College can make the needed transition and continue its heritage as one of the leading medical organizations in the country and the unifying one for this area.

It would be gratifying and satisfying to the ego if one could claim all this as his own, but such is not the case; these are the results of a real team effort. Besides the loyal and dedicated staff, the officers, members of Council and the numerous College committees, particular recognition is due Dr. John McClenahan for his contributions as acting secretary to Council in lieu of an Executive Director; to Drs. Joseph Stokes and Thomas Rathmell for their efficient management of the Membership Committee; to Dr. J. Kapp Clark for his time-consuming administration and efficient handling of financial affairs; to our Bylaws Committee, who labor untiringly over the selection of the proper wording that will convey the intent of the Fellowship; to Dr. Gordon French, who as chairman of the Scientific Business Committee was responsible almost single handedly for our programs for the past few years, including the series on Medicine and Society; to Dr. Edward Rosenow for his wise personal counsel; to Dr. T. Grier Miller for his availability and responsiveness in times of need, and finally to my Vice President, Dr. Katharine Sturgis, for her constant encouragement and support.

First Executive Director of The College of Physicians: Memoir of W. Wallace Dyer 1906–1970*

By FRANCIS C. WOOD, M.D.

W. WALLACE DYER, M.D., was born in Pittsburgh on July 8, 1906. His father was William John Dyer and his mother Beulah Conkel. He was elected a Fellow of The College of Physicians of Philadelphia in 1942. He died on September 14, 1970, at the age of 64. He is survived by his widow, the former Mabel Oberholzer, two sons, W. Wallace, Jr., and Jonathan, and one grandchild, Elizabeth Stuart Dyer.

His home from 1914 to 1932 was in Uniontown, Pa. He attended Mercersburg Academy, graduating in 1924 as the salutatorian of his class. He then went to Princeton University, graduating in 1928. He entered the School of Medicine of the University of Pennsylvania and was graduated with Alpha Omega Alpha honors in 1932. He spent the next five years at the Philadelphia General Hospital as Intern 1932–34, Resident 1934–35 and Research Fellow 1935–37. He then joined the faculty of the Department of Medicine of the School of Medicine of the University of Pennsylvania, where he was successively Assistant Instructor 1937–42, Instructor 1942–45, Associate 1945–47, Assistant Professor of Clinical Medicine 1947–52, Associate Professor of Clinical Medicine 1952–59, and Professor of Clinical Medicine from 1959 to 1970.

He was certified by the American Board of Internal Medicine in 1947.

He was Chief of the Diabetes Clinic, Hospital of the University of Pennsylvania from 1948 to 1955.

He was Chief of the Metabolic Section, Philadelphia General Hospital, 1954–70.

He became the first Director of the Department of Medicine at the Bryn Mawr Hospital in 1947 and remained at this post until 1959.

In 1959 he became Chief of the University of Pennsylvania's Service "Division A" at the Philadelphia General Hospital.

In 1967 he was appointed Executive Director of The College of Physicians of Philadelphia and served in this capacity until his death.

He was a member of a number of medical societies: the honorary fraternity of Alpha Omega Alpha; the American Clinical and Climatological Association; the American Diabetes Association (member of the Council); the American Medical Association; the American College of Physicians (Fellow); the John Morgan Society; the Meigs Society; the Philadelphia Metabolic Association (member of the Board and first editor of its *Diabetic Digest*); and The College of Physicians of Philadelphia.

He served in a number of capacities with various organizations: he was President of the Interns Association and later of the Ex-Residents Society of the Philadelphia General Hospital; he was on the school board of Marple Township; he was a medical advisor to Local Board 107 of the Pennsylvania Selective Service System for ten years; he was Secretary-Treasurer of the Medical Alumni of the University of Pennsylvania; he was President of the Bryn Mawr Hospital Staff (1956–58). He was on the Board of Governors of the Delaware Valley Diabetes Association; he was Chairman of the Committee on Nutrition, Metabolic Dis-

* Read before The College of Physicians of Philadelphia, 6 January 1971. Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Fig. 1. W. Wallace Dyer, M.D., first Executive Director of The College of Physicians of Philadelphia.

eases and Cardiovascular Diseases of the Pennsylvania State Medical Society, and a member of its Cardiovascular Committee; he was consultant to the Home for Incurables.

He was the author of fourteen medical articles, most of them having to do with diabetes, which was his special interest in medicine.

Dr. Dyer had so many interests and served so many important causes that it is difficult to choose which of them to single out as highlights in his career.

He was, of course, first and foremost, a physician with a brilliant mind, sound training, and those human and spiritual qualities developed to the *n*th degree, which all patients hope to find in their physicians. In 1938, the year after he finished his research fellowship, he announced the opening of his office for the practice of medicine in Broomall, Pa. In 1942 he became associated with Dr. Thomas Fitz-Hugh in the practice of medicine at 2016 DeLancey Place. Later he opened an office near the Bryn Mawr Hospital where he continued to see patients until his death.

He was a superb teacher of medical students and house staff at the Hospital of the University of Pennsylvania and the Philadelphia General Hospital. This led to his appointment in 1947 as the first Director of the Department of Medicine at the Bryn Mawr Hospital, which post he held for twelve years. Prior to this appointment there were four Medical Services, with little in the way of an educational program. Under his leadership the department was restructured and developed. Most of the recognized subspecialties in medicine were given both a consulting service and a specialty clinic in the Out-Patient Department. The educational effort of the department was amplified and improved. He established a weekly medical conference and an approved residency training program and gave the Bryn Mawr Hospital a unified, modern, competent Department of Medicine. On his retirement from this post, a letter from J. Randolph Burke, Managing Director of the Bryn Mawr Hospital, dated June 2, 1959, states, "What you have done for Bryn Mawr Hospital will remain. We owe you an immense debt which I am proud to acknowledge, not only for the solid structure of the Department of Medicine, but even more important, for your fostering and upholding the highest standard of personal and professional integrity. We salute you with gratitude, and also with admiration and affection." When he left this post to become Director of Division A, the service of the University of Pennsylvania at the Philadelphia General Hospital, the Bryn Mawr staff felt the loss very keenly of "a good friend and outstanding teacher." The trust which Dr. Dyer inspired in the staff in his new post at the Philadelphia General Hospital and his gentle, wise, far-sighted behavior in this capacity contributed tremendously to the development of the services under his jurisdiction, to the teaching program, and to the efficiency of the entire hospital.

His many other contributions to the welfare of sick people are indicated in his curriculum vitae, but one should be mentioned particularly, the development of a summer camp for diabetic children. In 1934 he obtained the loan of an old farm near Buckingham, Pennsylvania, from a nurse at the Philadelphia General Hospital and established the first summer camp for young diabetics. This has developed over the years into the present "Camp Firefly" at Spring Mount, Montgomery County, which is operated by the John B. Deaver Auxiliary of the Lankenau Hospital, under the sponsorship of the Philadelphia Metabolic Association. Dr. Dyer worked in this camp and obtained some of the personnel and the funds to help build it to its present state. It has several groups of diabetic children during the summer, each of which spends three weeks there. The children learn how to care for their diabetic problems and enjoy a

happy holiday in the country. As one of his associates wrote to Mrs. Dyer, "Camp Firefly is really his memorial."

His last, and one of his greatest contributions, was made to The College of Physicians of Philadelphia during the last three years of his life. On Friday, November 10, 1967, the President of the College in an address to the Fellows at the 180th anniversary reception, stated, "We need a full-time executive director to be captain of the team . . . He must understand finances and administration, but he must be thoughtful and gentle about what he does . . . We don't want a hyper-efficient, cold-blooded individual who will destroy the lovely atmosphere of the College and the loyalty and enthusiasm of our wonderful staff."

On December 21, 1967, Dr. Dyer assumed this post, and proved to be exactly the person we had looked for.

On January 7, 1970, the President made these comments about Dr. Dyer's accomplishments: "Our administration is in good trim under the wise and kindly guidance of our Executive Director, Dr. W. Wallace Dyer. The enjoyment of being President is dependent primarily on the fact that you no longer have to keep everything in mind or in order, nor do you have to have any imagination or good ideas. Dr. Dyer and his staff have done all of this to perfection. He has earned the loyalty of our staff. He has set up our financial affairs on a sound basis, and we are living within our income. He has presided over the improvement of the appearance and function of this beautiful building."

He was a wonderful Executive Director.

Dr. Dyer was a tall, handsome, distinguished, aristocratic man. He was one of the finest physicians. He was a superb teacher. He was a wise, far-sighted planner and administrator. He was a kindly, thoughtful, gentle man. However, on at least one occasion, when he knew something was wrong, "he took a position even at great personal sacrifice which indicated to all his utter uncompromising determination." One of the most remarkable things about him was that "he never raised his voice, even to his children." This almost incredible fact is attested to by his wife, who ought to know.

Medical Care: Doctors and Community Control[1]

By MARTIN CHERKASKY, M.D.[2]

Fellows and guests, it is a pleasure to be here. I have read the names of those who have given the Anders Lecture, and I am honored to join that list.

My wife and I came into Philadelphia early today and had lunch at the Barclay Hotel. Everything was so peaceful and quiet there—the opposite of the disruption and trouble I plan to talk with you about. And now, here in these surroundings, it is very hard to know whether I am having a bad dream or whether, in fact, the things that concern me, that I want to share with you tonight, are real. But, I am quite convinced they are real, because I was there yesterday, and I will be back there tomorrow.

For the last two years, and with great concentration over the last three months, I have been dealing with the problems of how a medical care institution relates itself in a constructive and acceptable manner to a community, particularly a poor community. I have been devoting my time and energies to this problem, not only as it concerns Montefiore Hospital and Medical Center, but also in my role at the Albert Einstein College of Medicine, which has involved me in the last several weeks in a horrendous series of crises and conflicts. I come here tonight to tell you about these things, not because I want your sympathy for my difficulties, nor just to make it interesting, as trouble sometimes is, but because, at least in my mind, these problems are of the utmost seriousness, and we must resolve them if this society is to continue to exist and to progress.

Rather than talk with you in broad and philosophical terms, at which I am very poor anyway, I want to relate actual events to you, because I believe the lessons learned from reality are by far our best guides. I am going to build my comments around the experiences we at Montefiore Hospital have had in the last four years in creating and operating a health activity in the ghetto of the South Bronx.

Our program is, in itself, a very significant health care undertaking, with all kinds of meanings for broad areas of organization and delivery of health care services. I want to present the program to you briefly. We believe it is a good program and a replicable model for urban areas. I also want to bring to your attention the matter of community control and, as forcefully as I can, my view that incorporating the 30 to 40 million poor as equal members of society is no longer a matter of choice, but is essential to the preservation of this country and what remains of its great values.

In 1964, the Office of Economic Opportunity made it possible to create pilot projects in poor areas for the purpose of delivering health services to these poverty pockets, which were at that time virtual medical deserts. The projects were to be operated with "the maximum feasible participation of the poor," a catchy phrase with endless ramifications. In addition to delivering health care, they were also to serve as neighborhood educational centers, training residents to be health workers of the customary variety, as well as new kinds of health aides created to serve local needs. The expressed

[1] James M. Anders Lecture XLIX, The College of Physicians of Philadelphia, 2 December 1970.

[2] Director, Montefiore Hospital and Medical Center, 111 East 210th Street, New York, New York 10467; Atran Professor and Chairman, Department of Community Health, Albert Einstein College of Medicine.

purpose of these training programs was to provide the poor with an opportunity to become skilled and then gainfully employed, breaking the cycle of poverty in which most residents of the ghetto are forever trapped.

We were particularly fortunate to have with us at that time a young man, Dr. Harold Wise—mark that name well—a young physician who was just completing his residency in medicine at Montefiore. Dr. Wise has a deep interest in the health care problems of the society, particularly those of the poor. He possesses, in addition, a tough, critical and analytical mind. Along with these qualities, he has an enduring and seemingly endless commitment to the task of developing new mechanisms, new workers and new relationships to help change the miserably inadequate health care services available to all people in this country, and especially the kind of care given to those who have suffered the most—the blacks and the Puerto Ricans, the Chicanos and the poor whites.

One of the things that we were deeply concerned about, and one of the things that I think we handled reasonably well, was that in our enthusiasm for the job, and in our warm human feeling for the plight of the people we were to serve, we did not allow ourselves to be carried away and make commitments to them that the reality of our circumstances would not allow us to fulfill. Among the real dangers we have in dealing with these problems is that bleeding-heart liberals, feeling guilty about what's going on in the relationships between whites and blacks, make commitments that cannot be kept and thereby create worse problems, not only for themselves, but also for those they mean very well to serve.

The monies for the project come from the federal government to Montefiore, and I deemed it to be our responsibility to be in control of the program in order to be able to fulfill the objectives for which the funds were being committed. In accordance with our view of the intent of the phrase "maximum feasible participation," we had 150 meetings, over a six-month period, in every nook and cranny of the 55-block area inhabited by the 45,000 people who were our target population.

A Community Advisory Board was fashioned by means of a mechanism which provided that people living in the community, who received the signatures of 25 others in the community, would become board members. We indicated clearly and unequivocally that this was, in fact, an advisory group, that we would solicit their advice and share all information with them, but that this was not an operating board, and that it would not have final say over administrative or policy matters. At the same time, we did say that if matters under consideration did not require technical or management expertise, the community's advice would be sought and heeded.

We said, further, that as the board became truly representative and responsible, and learned the skills that an operating board must master to be able to run a seven and a half million dollar complex medical care activity, we would join with them to seek the funding in the board's name, rather than in Montefiore's. At such time, we said, Montefiore would undertake to negotiate with the board and contract with it to deliver services.

We did not sugar-coat this. We made it quite clear that when we came to negotiate such a contract, we would demand virtually the same degree of authority. We said we would be willing to be held accountable and responsible for operation of the Center, but we would have to have that kind of operating authority without which complex enterprises cannot be made to function effectively.

The neighborhood we serve includes two census tracts in the southeast Bronx. The area, and the people who live in it, are typical of slums and slum dwellers every

place in this country—I dare say, even Philadelphia. Of the over 45,000 people in these 55 square blocks, more than 80 per cent are black or Puerto Rican. The median family income is approximately $2,000 per year. Fifty per cent of the people live on less than $4,000 a year. Remember, New York City is the most expensive city in which to live in the whole country. In this area, almost half the children, 460 per thousand, are provided for under the Aid for Dependent Children program, whereas the average for the entire city is 72 per thousand.

Infant mortality is 34.2 per thousand, while 20 blocks north, in the higher income, mostly white section, the mortality rate drops to 18 per thousand. Venereal disease from ages 7 to 20 in the North Bronx is 88 per 100,000. In the South Bronx it is 573 per 100,000.

A statistic we've just been able to develop dramatically illustrates the dreadful disparity between the middle class and the poor. In the North Bronx, in an area with a population of about 195,000, there was one death from measles in a given year. In the South Bronx, there were 27.5 deaths per 100,000—approximately 50 times as high.

A former Commissioner of Health for New York City noted that poverty was the leading cause of death in that city, and if the same mortality statistic prevailed in black and Puerto Rican districts as in Flushing, for example, which is almost 100 per cent white, we would save 12,000 lives a year in New York City. And remember, poverty populations are young. The median age in the poverty pocket of the South Bronx is 27.5, while in the North Bronx it is 42.5. And do you think that those blacks and those Puerto Ricans don't know these statistics as well as I do? And can you imagine the rage which surges within their breasts when they realize this?

In physical appearance, the area resembles a bombed city. Do you want to see what Vietnam is like? Let me walk with you down Bathgate Avenue in the South Bronx. In this wasteland, burned-out stores and tenements brood over garbage-strewn streets; the hulks of vandalized automobiles line the curbs, and decrepit household items, such as filthy mattresses, battered iceboxes and gutted armchairs, assault the eye and make walking a hazard.

Drug addicts, alcoholics and other derelicts lurk in the hallways and alleys, and droves of idle young men play stickball in the streets. We know of 2,500 hard drug addicts in that area of 45,000 people.

In designing a structure for the delivery of health services to this population, we decided that the most appropriate model would be a well-organized group practice located right in that area. Comprised of a major facility called the Martin Luther King, Jr. Health Center, and two satellites, one of which is already in operation and another which is yet to be activated, the project is staffed by health professionals who work as a team. Basically, the team consists of the doctor, a public health nurse and a family health worker, who is a new kind of paramedical. Other kinds of professionals are called upon as needed, and these professionals are not only medical specialists, but are lawyers, social workers, educators and any other type of expert who can help the doctor deal with the social and political injustices that bear on the health of his patients. Health care can't be given in this area just by having a doctor see a patient. While the doctor diagnoses and treats lead poisoning, of which we have many cases, he calls upon his legal co-workers to get after the law-breaking landlord who exposes a child to the lead paint in the first place. Recently at the Center, we were talking about this very problem. Do you know that, when you go after a landlord with such a violation, it takes approximately six months to finally get the case adjudicated, and the average fine against him is something like 14 dollars?

In order to deliver health care to the poor, it is necessary to build bridges between the social institutions which serve

middle-class America and the radically different members of the deprived community. One of the bridges that we have created is the family health worker, the new kind of paramedical I mentioned a minute ago. Selected from among local residents, candidates attend a 24-week training program at the Center, where they are taught to function as part public health nurse, part health educator, part legal advocate and part social worker.

At the King Health Center, we also train community residents to be rehabilitation aides, lab technicians, medical record keepers, operating room technicians, and so on. For some adults, this training provides the first opportunity they have ever had to be gainfully employed. We have all heard people say of the poor, "They don't want to work; they like to be on welfare." I want you to know that we have 12 applicants for every training opportunity we can offer. Some of our graduates have remained with us at the Center. Others are helping to relieve the acute shortage of non-professional help elsewhere in the medical field. Still others have gone on to college.

In a new program we are conducting jointly with the Herbert Lehman College, part of the City University, we are training young people, mostly black and Puerto Rican, who have limited formal education, to become administrators of medical care units. After completing a three-year course, which combines on-the-job training at the Health Center with academic study at Lehman College, these low entry job holders will acquire a baccalaureate degree, as well as a profession, and will be well equipped to meet responsibilities as medical care administrators. We have worked it out so that we provide up to 50 per cent release time to enable these people to overcome the incredible handicaps that their poor basic education represents.

This summer, we embarked on a very exciting program of internships and residencies in social medicine. We were looking for an opportunity to train some of the new, young physicians, who have social commitment, to work as members of a team—young physicians who might develop into a cadre of leaders for medicine in the future. This internship and residency program combines traditional, in-hospital training at Montefiore with service at the Martin Luther King Health Center and also provides formal training in the elements of social medicine by the faculty of the Albert Einstein College of Medicine.

We went into this venture with some apprehension, because we were not sure we would have many takers for this kind of program. Instead, we were overwhelmed. We had eight spots, four in pediatrics and four in medicine, and we got the very best people. That was last July. We are now considering people for 12 spots in the next year, which begins in July of 1971. More than 75 young people have already applied, among them some of the brightest students from the best medical schools in the country.

An important part of this program is the manner in which the candidates are chosen. After they have been approved for academic acceptability by the heads of the departments at Montefiore, they are then screened by a mixed panel consisting of health professionals, Center employees, and a member of the Community Advisory Board. This panel ranks the candidates in order of their compatibility with the community. Interestingly enough, the rankings by the community people and the professionals have virtually coincided.

Overall, this neighborhood project is probably one of the most successful OEO ventures in the United States. We have had some 390 area residents in our training courses. We have 36,000 registered patients, and this year, we will provide a quarter of a million services. The infant mortality statistics illustrate, dramatically, the story of our impact. In 1969, in that area generally, there were 30 infant deaths for one thou-

sand live births. Except that, among the 500 women to whom we gave pre-natal care and whom we delivered, there were 10 deaths per thousand live births—10 as opposed to 30.

While making major efforts to meet the needs of our population, we have also been, at the same time, availing ourselves of the unique opportunity to learn more about the people we serve, because we know very little about the culture, either of poverty, or of Puerto Ricans, or, indeed, of people other than ourselves. Thus far, we have published some 20 papers, and are currently engaged in a number of fascinating research projects.

As a result of this extraordinary, impressive list of accomplishments, the program gained wide recognition. In 1970, we had the largest total OEO budget of any such experimental project funded by that agency. It sounds like the story of a triumph, doesn't it? So what's the problem?

There has been one constantly running sore, and that has had to do with citizen participation. For all the magnificence of this program, and for all its potential for teaching us about how to conduct activities such as these, that enterprise rests on shifting sand. Despite the clear understanding of the advisory nature of the board, there has been constant pressure by the board for involvement in administrative and policy-making decisions not envisioned in such a relationship. There was a notion that no matter how advisory its nature, the board really should be the final authority with regard to hiring, firing and program development. What was really being sought was authority without responsibility, for the board members had never organized themselves effectively so that they could seek the funds directly and then try to work out a contract with us.

The board suffers from very serious internal problems having to do with the ever-present simmering antagonism between blacks and Puerto Ricans, and it would have been very easy for anybody who wanted to manipulate the situation to have these two groups at each other's throats. The members of the board were under all kinds of pressures from the multiplicity of constituencies in the ghetto to demonstrate their effectiveness and influence, and began to intrude themselves heavily into personnel and administrative matters—into that business of gathering and keeping technically skilled people which is the *sine qua non* of any health care enterprise.

You must remember that in this community, the Martin Luther King Health Center is the most significant social institution there. In fact, it is almost the only social institution in an area characterized by fragmentation, instability, violence and crime. While the word "community" conjures up, in white middle-class minds, the town hall in a pristine New England village, the word does not have that connotation as far as the ghetto is concerned. Around each issue, there are different communities with different interests. What is more, in the tenements of the Martin Luther King Health Center area, there is a 50 per cent turnover in population every several years. Therefore, a community spokesman speaks not for the community as a whole but for those who rallied to a particular cause or issue at the time it was raised and they were living in the area. The dilemma, which any institution in the ghetto faces, is how to correlate the demands of the few, however articulate, with what it believes are the best interests of the many who don't speak out. This is never an easy task.

"All power to the people," is a cherished slogan which the untutored and even the highly sophisticated radical uses, as though it were an operating reality. It will not, of itself, produce quality medical care. We are all at the mercy of technology and any demands for control must take into account technical imperatives. I cannot operate the Montefiore Hospital without radiologists, and the Martin Luther King Health Center

cannot be run without doctors and nurses. The reality is that the whole enterprise must be so structured as to attract and keep competent professionals.

As the King Center Advisory Board began to function without regard to these realities, it felt it should have much more authority over operations and procedures than it was being given. As a result, a schism developed between the board and the administration, which came to look upon the board not as a partner, but as an obstacle to getting the job done and as a threat to the stability and a continuance of the activity.

The Center has about 600 employees, 90 per cent of whom are blacks and Puerto Ricans and most of whom live in the area. It is interesting to note where their loyalties lie. Their concern has been that if the advisory board, which they saw to be unstable, assumed control, their jobs would be in jeopardy. They prefer to work with Montefiore, as members of the 1199 Union, with job security protected by grievance and other procedures.

I have talked a good deal about the board's failings. With all due regard to that, however, it is clear that while we used the advisory board at times effectively and well, we did not, in some cases and probably in most cases, use it as fully or as appropriately as desirable. Nor were we ever able to make the members feel that they were essential partners, and for a very good reason. Structured as an advisory board, they were not.

The conflict has gradually escalated during these four years, and the disappointments visited upon the poor certainly have not helped. The cutback in Medicaid, the anti-social approach to problems by the federal government, the grinding destruction of the ghetto itself, the epidemic proportions of drug addiction (now the greatest single cause of death of New York City residents between the ages of 15 and 35), and the incredible lawlessness of the ghetto, have added to the frustrations and restlessness of the people. It is worth our noting that among the needs of the poor, as expressed by them, police protection is very much higher on their agenda than medical care.

I want to relate an incident to you, but first I want to make clear that if it had not been this particular issue around which the antagonism boiled into open anger, it would have been another. With our continuing commitment to the employment of blacks and Puerto Ricans at all levels, we hired, for an important position, a black man who came with excellent credentials. When this did not work out as we had hoped, we decided, after the most careful thought, and with full consideration of the delicacy of the situation, that we would have to ask him to stand aside. We made every effort to make this action as painless as possible and to work out arrangements which would be satisfactory to all concerned. Despite our attempt to deal sensitively with this administrative matter, the employee involved made an issue of the decision and the Board chose the conflict as a focal point around which to raise the entire issue of decision-making responsibility and authority. And, as I say, the incident is not the major point, because the struggle was going to take place anyway.

The board presented us with a list of ten demands, all of which sought substantial control over hiring and firing. That's where the money is, so that's where the power is. During late November and December, I had two public confrontations on this matter. In the first instance, I was to meet with the board for a discussion of these demands. I found, on arriving at the Health Center, that in addition to about 15 board members there were some 75 other people present who came from various corners of that community, as well as outside it. Discussion turned out to be very unpleasant, full of rhetoric, challenge, denunciation and threat. I proposed that we create a task

force consisting of representatives from the community board, the workers and the administration, to produce within a given time, say, six months, a plan that would enable us to move more effectively and meaningfully toward community participation, leading to the previously stated goal whereby the local board would obtain the grant, because until you get the money, you are not in control. They could then negotiate a contract with us or someone else for the services. This suggestion did not generate interest. The demand was repeated that the individual in question be kept in his job. It was alleged that all the facts we had presented to substantiate our charge that he was incompetent were nothing but reflections of our racism.

I agreed to leave his status untouched until another meeting could be arranged at which officials from the OEO would be present to interpret the guidelines. That meeting, held in early December, was to be solely with the board members, but again there was a large gathering. The upshot was that the same kind of diatribe ensued as before, with most of the speeches and comments coming from non-board people, and often from those who did not even live in the area. Quite clearly, the battle over this employee was the test by which the group hoped to wrest operating responsibility from the administration.

Three hours of threatening, unpleasant, unproductive debate and discussion led to very little. The OEO people patiently repeated that the board was advisory in nature, and that authority rested with Montefiore Hospital.

At the height of this debate, some of the people turned to the OEO representatives and said, "If we cannot have it our way, we want to see to it that the seven and a half million dollars does not go to Montefiore. If necessary, we would rather burn this place to the ground." That seemed to me so completely irrational that I asked, "Who is going to be damaged if we don't get the money? Montefiore is here because it wants to be here. This is part of our responsibility, but in the last analysis, if the money does not come, and the Martin Luther King Health Center goes down the drain, there will be more than 600 people who will lose their jobs. There are hundreds of other people whom we would be training for new professions, to give them a way out of this dreadful situation. There are children who would die and mothers who would not receive care. If, in your frustration, you took this step to cut off the money, you would be damaging no one but yourselves."

An impeccable argument, so it seemed. But one young man, whom I had observed to be both articulate and passionate, got up and said, "You're right. Some of us will die. Some of us will have to go back to that miserable city hospital where we are mistreated. Some of us will lose jobs, and some of us will have opportunities vastly curtailed. But what is it that you think you people can do to us that you haven't done to us for years and years? There is no threat for us in any deprivation."

I recognized, in a way I never had before, that to these people, in fact, I guess, to all people, it is more deadly to be powerless over your own conditions and your own fate than to suffer deprivation, disease and even death. There was a note of despair, an incredible mistrust and hate for whitey, and for what whitey has done to them and for what they think has been done to them. It seemed to me that this focusing of resentment and hatred is almost an essential fuel that keeps many of these bright and discerning people going, and makes them candidates for participation in the violent, stormy, irrational revolution of the streets.

In abrasive situations such as these, it is the inclination of even committed men to throw up their hands and walk away, but in my opinion, that option is no longer open to us, if it ever was. I think we must stay in there and work with the same kind of steadfastness we would if we were on a

sinking ship and we all had to pitch in or go down together.

When I first came into medicine, I believed that because it was right, you did it. But I have learned that people, including doctors, are motivated by more powerful forces than that. I think that, long ago, we should have been impelled by morality to incorporate the 30 to 40 million poor into the society. I have despaired that we will do it merely because it is right. I hope now that, in fact, we will do it because it is in our own self-interest.

We are well past the point where the gathering storm, the chaos confronting us, is a matter for comfortable academic contemplation or remote, ivory tower theorizing. I have been wondering, because I am so close to this, whether I see a threat greater than really exists. And so, I have talked about it with people who know what is going on but who have other, more dispassionate views than I, and they agree that the situation is potentially explosive. I am convinced that, unless we address ourselves quickly, with both personal and national commitment, to the resolution of the incredible deprivations suffered by the poor, we face revolution from the left and/or repression from the right, and from my view, one would be no better than the other.

And, we had better be prepared to include the poor as full and equal partners, for they will have it no other way. Since health care is proclaimed to be not a privilege, but the right of every man, so the deprived in our society want a say in the programs which are designed for them. Despite the difficulties I have been pointing out, the misunderstandings, the fiascoes, and even the bloody battles in which this will involve us, I cannot help but agree that the hallmark of a democratic society is that the people control the social institutions which serve them. That must apply to the poor as it does to the rich, or it will apply to none.

I do not think anyone in this room, no matter how genuinely unbiased and progressive he is, could deny that he has, at times, had surges of hostility toward those people whose violence threatens him in a society he holds secure. I know all of us in this room are too civilized to discuss these hostile feelings overtly, but there are many others who are not so constrained. If, instead of accepting and acting on the petitions of those whose deprivation our society has long sanctioned by its silence, we should decide, for all kinds of specious, but readily concocted rationalizations, that repression is the way, then we will be lost as surely as if we abdicate to the revolutionaries. If we do not quickly move in the direction of law with justice, toward social commitment, reconstruction and reparation, we will be clearly headed for "law and order"—two words that have been semanticized to mean something quite sinister and different than they once did.

That huge minorities can be repressed for indeterminate periods of time is a tenable proposition. I must point out that, in this instance, repression would extend to the best of our children, who have seen, more clearly than any other generation of Americans, the immorality and self-destruction of our ways. What repression would do to them, as well as to the oppressors, is more than I can contemplate. And, I question what would remain of value in this society which would justify its continuance. As an old time radical, now referred to by the New Left with their maximum opprobrium of "liberal," I am not yet ready to concede that we cannot collectively turn whatever resources are necessary to solving the problems of the poor, although I am not sanguine. In so doing, we could draw the fangs of those who are the "crazies." I believed in revolution once, but now, having seen a few, I know that a bright, beautiful world, free of man's inhumanity to man, does not so readily come about. Revolution involves the most incredible losses in human life and social institutions, and after

all the blood and anguish, the usual outcome is that one set of thugs and oppressors replaces another.

It is my belief that as physician citizens, with the special status we are accorded, with our acknowledged responsibility for community health in its broadest definition, we must turn our attention in a massive way to the poor and their social and medical problems. We must not be put off because our efforts to help are greeted with derision, obstruction and hostility. We are dealing with a mass of deprived people who are as clearly ill because of their deprivation as is a patient who suffers a physical or mental illness, and we must not reject the patient because his behavior may be difficult or even bizarre. We must understand. We must, as doctors to the people, be leaders in medicine and politics, helping to cure the sickness that afflicts our society.

In conclusion, I want to bring to your attention a warning set forth by George Bernard Shaw 25 or 30 years ago, which remains both potent and pertinent today.

"All other crimes are virtuous compared to poverty," Shaw said. "There are millions of poor people, abject people, dirty people, ill-fed people, ill-clothed people, who poison us, morally and physically, kill the happiness of society and force us to do away with our liberties for fear they will rise up against us and drag us down into their abyss. Such poverty as we have today in our cities degrades the poor and affects, with its degradation, the whole neighborhood in which they live, and whatever can degrade a neighborhood can degrade a country, and continent and finally the whole civilized world. Its bad effects cannot be escaped by the rich.

"When poverty produces a virulent infection, the rich catch the disease and their children die of it. When it produces crime and violence, the rich go in fear of both. When it produces bad manners and bad language, the children of the rich pick it up, no matter how carefully they are secluded. The saying that we are members one of another is not a mere pious formula to be repeated in church without any meaning; it is a literal truth; for though the rich end of the town can avoid living with the poor, it cannot avoid dying with the poor."

Abraham Chovet (1704–1790): The "Perfect Original"[1]

By CLAIRE E. FOX, PH.D.,[2] AND SARETTA BERLIN[3]

MID-18th-Century Philadelphia had everything: plague, pestilence, fever, disease, poverty and, above all, a grim awareness of the harsh realities of colonial life. Life was short and times were difficult; there was unrest in the colonies, oppression from England, uncertainty in politics. As a growing urban center and port city, Philadelphia reflected all the turbulence of the changing times.

But colonial Philadelphia also had citizens who, if they could not solve its problems, could at least alleviate some of the harshness of the times with their wit, their knowledge, and their humor. The city took on great color and vitality from the countless famous—and not so famous—men who came to partake in its growth and mold its future.

One of the most humorous and colorful of these was an important man of medicine, Abraham Chovet. Chovet will always rate at least a footnote in the history of medicine for his early work in the teaching of anatomy. He was a skilled anatomist at a time when anatomy was the only way to visualize the human body. He was the creator of one of the first sets of visual aids used in American medical education; his collection of anatomical models and his lectures played an important role in defining early American medical education practices.

It is unfortunate that Abraham Chovet's collection did not survive into this century, as far as we can determine. However, we have the opinion of his contemporaries that it was as fine as anything available at that time. What little remains of Dr. Chovet's remarkable career may be seen in the collection of The College of Physicians of Philadelphia: some books, several engravings, a silhouette and an oil portrait. Dr. Thomas Haviland, Assistant Professor of Anatomy at the University of Pennsylvania, owns the wax model of the heart used by Chovet in his lectures (1).

A French traveller (2) in Philadelphia called Abraham Chovet a "perfect original." A witty and eccentric man, Dr. Chovet delighted in shocking the quiet Quaker citizens of Philadelphia.

"That physician is an impostor who does not live until he is eighty!" he thundered (3). Defiant and contentious, Dr. Chovet horrified staid citizens by publicly tempting fate with that statement while he still had many years to go before reaching 80. Too cantankerous to die before he said he would, Chovet lived to be 87 years old, alternately delighting and shocking 18th-Century Philadelphia with his sincerely eccentric behavior.

His antics were well-known to almost everyone in the city. His language was considered shocking in the extreme, his use of expletives being described (3) as "neither useful nor ornamental. . ."

His politics were impossible. A man who took great pleasure in controversy, Chovet was a notorious Tory when the colonials were in power and an outspoken Whig-Revolutionary when the British occupied the city. He barely escaped being tarred and feathered for the Royalist views that he held openly during the Revolutionary

[1] Section on Medical History, The College of Physicians of Philadelphia, to be read in October 1971.

[2] Greater Delaware Valley Regional Medical Program, 551 West Lancaster Avenue, Haverford, Pennsylvania 19041.

[3] Coronary Drug Project, Albert Einstein Medical Center, Philadelphia, Pennsylvania 19141.

Fig. 1. Painting of Dr. Abraham Chovet (1704–1790) by unknown artist. Chovet was one of the twelve senior founders of The College of Physicians of Philadelphia.

period, but took the oath of allegiance to the Congress of the colonies in 1777, several years before nationhood was proclaimed. A French visitor to the city, the Marquis de Chastellux, noted in his diary that Chovet was a real eccentric: "... he speaks with fire, and expresses himself as easily in French as if he were still in our schools of surgery ... his chief characteristic is contrary-mindedness. ..."

But Abraham Chovet was more than just a disputatious doctor. The records of the time reveal that he was a compassionate physician as well as an outstanding anatomist and teacher of anatomy. He loved medicine and expounded on his subject so well and so colorfully that his lectures on anatomy attracted the rich and famous of the city. His lectures were attended by important people of the time and were commented and reported upon in the daily press with all the attention usually given to the more important balls and galas. In addition to these accomplishments—and probably most important in terms of the history of medicine—Chovet developed wax models of the parts of the body as early teaching aids. He brought his extensive knowledge of anatomy and his remarkable collection of anatomical preparations to the colonies when medical education was barely defined as a discipline. Used in his lectures, and later as the basis of the Medical Museum of the University of Pennsylvania, Chovet's models were important and basic to the development of teaching techniques in the United States.

Already past 70 when he came to Philadelphia, Chovet entered the city with enough mystery in his background to suc-

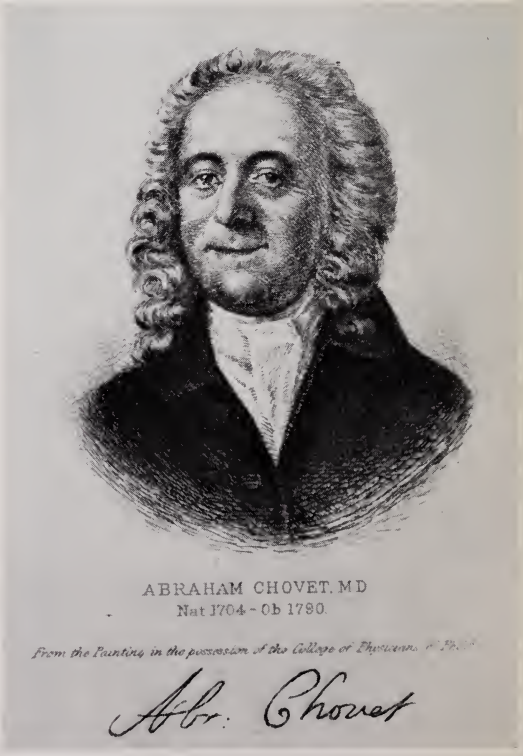


Fig. 2. Portrait of Chovet signed by the etcher Albert Rosenthal. Taken from the painting owned by The College of Physicians of Philadelphia.

ceed as a perfect medical original. His birthplace was thought to be England, but he came to the colonies by way of Jamaica and the Barbados, supposedly fleeing an insurrection of slaves with his wife and daughter. How and where Chovet got his medical training is not known, but the meager records of the time indicate that he was recognized as an accomplished anatomist very early in his career. In 1732, when he was 28 years old, Chovet issued a remarkable little book entitled: *A Syllabus, or Index, of all the Parts that enter the Composition of the Human Body,* printed for the author in London. Divided into twelve lectures and planned "For the Use of Those that go through Courses of Anatomy," the book is amazingly comprehensive. The anatomy of the brain, for instance, is covered in great detail; the discussion of the heart and lungs includes an advanced description of the circulation of the blood, and the lymphatic system is presented thoroughly.

Throughout the *Index,* Chovet describes in some detail his plan for "a compleat course in anatomy." He outlines his conception of an ideal course as follows:

> "...I am also provided with natural and artificial preparations sufficient for giving a compleat course of anatomy, which will be of great use to young beginners for the first course, in order to prepare them for the knife; as also those who are willing to be informed in the natural structure, tho' not devoted to the practice of physic or surgery, and are often times offended at the smell and sight of a dissected body, for which reason I have compiled this Syllabus as brief and suitable thereto and as much in English as the nature of the subject will permit, avoiding many superfluities."

In order to implement this kind of course in anatomy, Chovet noted that he was preparing the following anatomical models which would be used in demonstrations:

> "An artificial Anatomy of a Boy, representing on one Side all the External Muscles in their natural Situation...
> "The Great Artery and Vein injected, the Artery conveying its Branches from the Heart to all the Parts of the Body, even to the smallest Capillary...
> "In the Thorax the Lungs are seen inflated in their natural Situation, with the Heart and Vessels, the Coronary Artery and Vein twining from its Bace, to its Point...
> "The artificial Head of a Man modelled from the natural, wherein are described the Muscles of the Pharynx, Larynx and Tongue, with the Distribution of the Artery, Veins and Nerve to each of them.
> "The Parts of Generation belonging to both Sexes, both natural and artificial.
> "The Foetus in Utero, in its real Situation, and Membranes with the Placenta Umbillical Vessels, & correctly modelled from the natural, as it was taken out of the Body of a Woman.
> "The real Head of a Woman, with a Heart injected.
> "The Body of a Man dissected, and prepared after a new Method, wherein all the Muscles are raised, and the whole Progress of each distinctly shown, with all the Internals, &c. Besides several other Preparations too tedious to mention."

Before Chovet completed these models and while still in England, he applied his knowledge of anatomy in a bizarre scheme

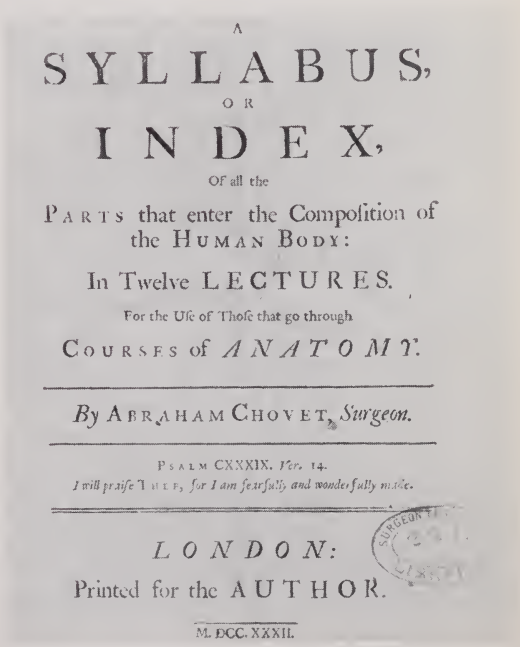

A
SYLLABUS,
OR
INDEX,
Of all the
PARTS that enter the Compofition of the HUMAN BODY:
In Twelve LECTURES.
For the Ufe of Thofe that go through
COURSES of *ANATOMY*.
By ABRAHAM CHOVET, *Surgeon.*
PSALM CXXXIX. *Ver.* 14.
I will praife THEE, for I am fearfully and wonderfully made.
LONDON:
Printed for the AUTHOR.
M. DCC. XXXII.

Fig. 3. Title page of the *Syllabus or Index,* owned by the National Library of Medicine.

to save the life of a man condemned to hanging. A florid account by C. P. Bryan (4) tells us that in April of 1733, when Chovet was about 29 years old, he "deliberately and ingeniously endeavored to prevent the full execution of the law by pitting science against a hangman's rope. . ." The circumstances were as strange as the deed itself. A highwayman named Gordon was sentenced to hang for a series of crimes against the king. After trying first to escape and then to bribe his jailers, Gordon hit upon the scheme of offering a reward to anyone who would help him escape his fate. This bizarre proposal reached the ears of young Chovet and he set about experimenting with dogs, "hanging" them for various periods and then restoring them to life. When he was satisfied that it could be done, Chovet arranged to be admitted to Newgate Prison where he interviewed Gordon and demanded the reward. The hapless criminal was probably too desperate to do otherwise, so he paid a goodly sum and allowed the doctor to perform a tracheotomy. Chovet opened the windpipe, inserted a silver tube in the condemned man's throat and instructed him to "close" his mouth, nose and ears the moment the hangman swung him off. How this was to be done is not known, but accounts of the time report that when Gordon was cut down, after hanging for some 45 minutes, his heart was still beating. Relatives rushed the victim to the nearby public house where Chovet was waiting to complete his assignment. He opened a vein, and was instantly rewarded by seeing the "dead" man open his eyes and heave a sigh. Other accounts reported that Gordon actually spoke to Chovet, but the conversation was a short one. Gordon's eyes closed almost immediately and despite Chovet's feverish efforts to revive him, he was dead. Chovet's reaction was a philosophical one: "Five minutes earlier, and he would have lived!!"

The experience was more disquieting for the victim than for the surgeon. Whether because of the notoriety or in spite of it, a few months later the *Records of the Worshipful Company of Barber-Surgeons of London* note the following entry:

> "Abraham Chovet S(urgeon) who had been bound to Peter Gongoure le Marque, a Foreign Brother of The Company, was Examined touching his skill in Surgery in order to be admitted a Foreign Brother. His answers were approved and he was ordered a diploma under the seal of the Company, admitting him as such for Three pounds, three shillings, which he paid down and was sworn a Foreign Brother of the Company."

It was recorded that Mr. Chovet took the Livery and Clothing of the Company and gave his note for the usual fine of ten pounds.

By the end of that year Chovet was appointed a Demonstrator of Anatomy, with special privileges granted by the Court. Foremost among these was the right to dissect one private and one public body for the students of his classes in anatomy. Chovet was considered extremely well qualified for this appointment, despite his failure with the highwayman, by virtue of his specialization in anatomy and the publication of the well-known *Index*. Chovet may have developed the models he described in his book to supplement demonstrations on the cadaver.

Even at this time, when he was not yet 30 years old, Chovet was adept at attracting the curious public to his private lectures. In the *London Evening Post* of December 27, 1733, Abraham Chovet, Surgeon, advertised the following event for the edification of the general public:

> "To be seen this day and for the future, price 5 s., at Mr. Lamark's, Surgeon, in Orange Street, Leicester Fields, Mr. Chovet's the surgeon's, New Figure of Anatomy, which represents a woman chained down upon a table, suppos'd opened alive; wherein the circulation of the blood is made visible through glass veins and arteries: the circulation is also seen from the mother to the child, and from the child to the mother, with the Systolick and Diastolick motion of the heart and

the action of the lungs. All which particulars, with several others, will be shewn and clearly explained by Mr. Chovet himself. Note, a Gentlewoman qualified will attend the ladies."

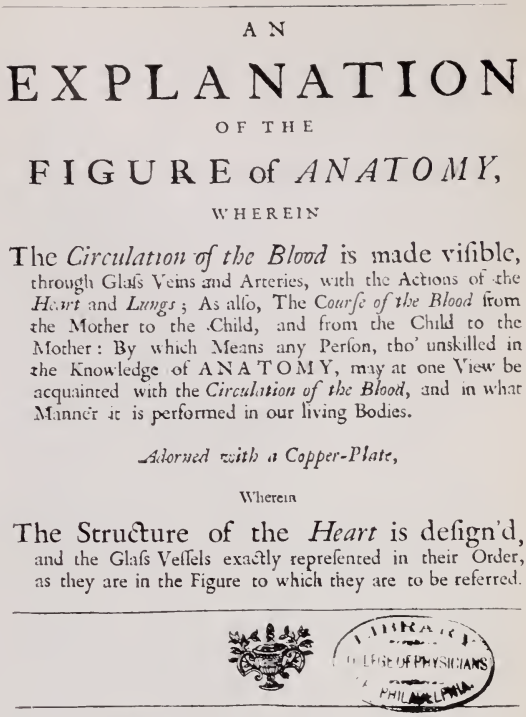
It should also be noted that there is a strong possibility that Chovet, in addition to publishing the *Index*, also produced in the 1730's an additional small work entitled *An Explanation of the Figure of Anatomy* (Figure 4). The title page of the pamphlet reproduces almost exactly the wording of the advertisement quoted above and is in the collection of the library of The College of Physicians catalogued under the name of Abraham Chovet.

The next mention of Chovet in the Annals of the Barber-Surgeons notes that he resigned his position as Demonstrator in 1736. No reason is given and the record is vague after the resignation. An early paper on Chovet's life (5) describes this period as follows:

"There seems to be considerable mystery surrounding the occasion of Chovet's resignation as Demonstrator in the Barber-Surgeons Company and his removal from London."

Several writers have suggested that Chovet's involvement with the highwayman was the real cause of his having to leave what appeared to be a good practice in London. Whatever the actual reason, Chovet is next recorded as practicing anatomy in the Barbados. In his diary, Chastellux (2) noted that "a prize (ship) being brought into Barbados, with a great deal of wax on board, Mr. Chovet took this opportunity to make different anatomical experiments in wax, and succeeded so well as to carry this art to the highest perfection."

The Universal Asylum and Columbian Magazine for 1790 reported that Chovet spent some years in Barbados and went from there to Jamaica. Again the date is uncertain but the *Gentleman's Magazine* for May 1759 announces the promotion of "Abra. Chovet, Esq., surgeon, of Kingston in Jamaica, to a Dr. of Physick." As in the case with so many of the details of Chovet's life, the reasons for his move to Jamaica and thence to Philadelphia are again largely unknown. George Norris, in his *Early History of Medicine in Philadelphia* (3), notes only that Chovet arrived in Philadelphia in 1774; other writers suggest that the doctor, his wife and their widowed daughter, Susannah Abington, fled an insurrection of the slaves. Another account has it that Chovet was actually en route back to London and stopped off in the colonies only to gather his strength for the long trip home. Whichever the reason, Chovet arrived in Philadelphia and began to give lectures on anatomy almost immediately. An advertisement in the *Pennsylvania Journal* and the *Weekly Advertiser* for November 9, 1774, made the following announcement:



AN

EXPLANATION

OF THE

FIGURE of *ANATOMY*,

WHEREIN

The *Circulation of the Blood* is made visible, through Glass Veins and Arteries, with the Actions of the *Heart* and *Lungs*; As also, The *Course of the Blood* from the Mother to the Child, and from the Child to the Mother: By which Means any Person, tho' unskilled in the Knowledge of ANATOMY, may at one View be acquainted with the *Circulation of the Blood*, and in what Manner it is performed in our living Bodies.

Adorned with a Copper-Plate,

Wherein

The Structure of the *Heart* is design'd, and the Glass Vessels exactly represented in their Order, as they are in the Figure to which they are to be referred.

LIBRARY COLLEGE OF PHYSICIANS PHILADELPHIA

LONDON: Printed in the Year 1737.

FIG. 4. Title page of *An Explanation of the Figure of Anatomy*. This work owned by The College of Physicians of Philadelphia has been attributed to Chovet because of the similarity of the wording of the title page to an advertisement which appeared in a 1733 London newspaper.

"On Friday, the 25th of November . . . Dr. Chovet will deliver the introductory discourse to his PHYSIOLOGICAL and ANATOMICAL LECTURES, at his Museum, in Vidal's Alley, Second Street."

The occasion was apparently a notable one, for the *Pennsylvania Gazette* of November 30, 1774, reported on the event as follows:

"On Friday last, DR. ABRAHAM CHOVET delivered an introductory discourse to his Anatomical and Physiological Lectures, at his new Theater in Vidal's Alley, in the presence of his Honour the Governor, The Trustees and Faculty of the College, the Clergy, The Doctors of Physics, the Students of Medicine, and a considerable number of the most respectable inhabitants of the city.—The Doctor introduced the evening's entertainment with an elegant Latin oration on the origin and dignity of Physics, which was succeeded by a very learned and ingenious discourse in English, on the history, excellence and extent of the Science of Anatomy and Physiology, whereon he made very honourable mention of those venerable names who in every age had contributed to their advancement. His curious wax-work figures, together with his numerous and very skilful injections and preparations of various parts of the human body, attracted the attention of every spectator; and were no less an evidence of a fine taste, judgment and accuracy, than the Lecture was of extensive reading, and perfect knowledge of the subject on which he treated. During the exhibition the company gave the strictest attention, and satisfaction evidently impressed upon every countenance, testified a grateful sense of the pleasure they enjoyed. The whole was conducted with the greatest politeness and decorum, and the company departed, expressing themselves in the highest terms of approbation. . . ."

It would appear from this glowing review that Dr. Chovet's lectures were a social as well as a medical success. A later advertisement, appearing in the *Pennsylvania Journal* and *Weekly Advertiser* announces the Anatomical Courses in terms that would appeal to a non-medical as well as a medical audience:

". . . As this course will not be attended with the disagreeable sight nor stench of recently deceased or putrid carcasses, which often disgust even the students in Physick as well as the curious, otherwise inclined to this useful and most sublime part of natural philosophy, it is to be hoped this undertaking will meet with suitable encouragement. . . ."

The use of wax anatomical models in place of cadavers undoubtedly made the lectures more appealing to those laymen who attended for entertainment or enlightenment. But the popularity of Chovet's lectures with both professional and lay audiences was to cause him immediate problems with the Philadelphia medical establishment. The founders of the new medical school at the University of Pennsylvania were engaged in a power struggle that would eventually involve the controversial doctor. In Whitfield J. Bell, Jr.'s important biography (6) of Dr. John Morgan, a founder of the school, there is a reference to problems revolving about the dominant personalities of its founders:

"The medical professors were doing their work well in a loose system where close agreement and cooperation were not essential. Beneath the surface and despite the success of the institution, however, they hardly liked or even trusted one another."

Dr. William S. Shippen, Jr., instructor in anatomy at the University of Pennsylvania, had quarreled publicly with Dr. John Morgan and Dr. Benjamin Rush. There were many reasons, but a great deal of the controversy revolved around the private lectures given by Philadelphia physicians. Sources of both income and prestige, many of these lectures were designed to appeal to laymen as well as to the medical students who were required to supplement their studies in this way. Although the medical department of the University of Pennsylvania was already conferring degrees, aspiring young doctors supplemented their university curriculum with these courses of study and practice given by many of the city's private physicians. Chovet's lectures, distinguished by his superior collection and continental training, soon became the most popular of these private

studies. Moreover, Chovet's arrival in the city coincided with Dr. Shippen's departure for service in the Continental Army; as the city's only instructor in anatomy, he naturally drew a great many of the students who were required to take courses in anatomy.

Chovet's lectures continued to grow in popularity with the young men who came to the urban center of Philadelphia to study medicine as well as with interested citizens and visitors to the city. Although it seems curious today, contemporary accounts report that the Anatomical Waxworks were among the principal scientific attractions of the city.

John Adams, in Philadelphia in 1774 as a delegate from Massachusetts to Congress, had visited Dr. Shippen in his chambers at Pennsylvania Hospital and compared his collection to Chovet's quite unfavorably. In his diary, Adams noted that Shippen's materials consisted of a "set of Anatomical Paintings and Castings in plaister of Paris representing different views of the Several parts of the Human body." These were the gift of Dr. John Fothergill of London to the newly established Pennsylvania Hospital and, until Chovet appeared in Philadelphia, were considered the epitome of anatomical teaching aids.

However, several months later Adams visited Chovet's collection and noted in his diary (7) the following comparison:

> "Went in the Morning to see Dr. Chevott (Chovet) and his Skelletons and Wax Work—most admirable, exquisite Representations of the whole Animal Economy . . . This Exhibition is much more exquisite than that of Dr. Shippen, at the Hospital. . . . These Wax Works are all of the Drs. own Hands."

Other visitors to Philadelphia also reported on Chovet's famous Anatomical Models: J. D. Schoepf, writing of his *Travels in the Confederation (1783–84)*, told of his visit to the famous doctor (8):

> "Dr. Chovet, a learned old man of much reading, and in his 79th year full of life and enthusiasm, although not a Professor has at times lectured on Anatomy, his favorite study. He is particularly known for his beautiful wax-work collection, largely his own fabrication and designed to illustrate the parts of the human body. He has, in addition, a considerable number of fine anatomical preparations and a notable and rare collection of books."

Although he was controversial and eccentric, Chovet's medical achievements appear to have been recognized by his adopted city. Ruschenberger's account of the founding of the prestigious College of Physicians of Philadelphia notes the following (9):

> "Of the twelve senior founders of the College of Physicians of Philadelphia, Dr. Chovet is the one who was not born in or near Philadelphia. At the time of forming the Society his years exceeded four score. At such an advanced age men are not invited to engage in a new enterprise unless their qualifications are eminent in the estimate of their colleagues."

However, following Dr. Shippen's return from the army, Dr. Chovet's popularity came to the attention of the professors at the University. For financial as well as professional reasons, Shippen objected to Chovet and charged that a Doctor Bond had advised the students to attend the private lectures of Chovet rather than the university-sponsored ones of Shippen's. The controversy did not appear to affect Dr. Chovet in any way, for in 1778, Dr. Chovet announced in the *Pennsylvania Evening Post* that he was erecting an amphitheater on Water Street to accommodate the many students who wished to attend his Course of Anatomical Lectures.

Chovet apparently prospered in Philadelphia and always maintained a home in one of the finer sections of the city. He lived first on Water Street and, when that area lost its prestige, moved to Race Street between Third and Fourth Streets. This last location was far from Doctor's Row, a section closer to the river between Front Street and Second Street. It is possible that Chovet's main source of income was from his

lectures, at two and a half joes per auditor, rather than from his practice.

By 1785, however, when he was 81 years old, there is evidence that Dr. Chovet was beginning to slow down. In July of that year he wrote to Colonel Timothy Pickering, of Boston, offering to sell his Anatomical Waxworks to some gentlemen of that city for 1200 guineas. The collection was described as containing "as much of the whole system of the Anatomy of the Human Body as is necessary to explain any part of the Animal economy." It included the following (10):

"... figure of man copied from dead subject completely dissected
"... body of woman 'bigg with child'
"... bust of man 'bigg as the Life—muscles of head & face beautifully described
"... Child—brain and nervous system described
"... Parts of Generation belonging to a woman
"... Posture of a full grown child preparing for birth
"... Gravid Womb taken from body of woman who died in Labor—child in posture directed for Birth
"... New born child who died soon after Birth—open to show how child is nourished."

Fig. 5. Dr. Abraham Chovet at the age of 80. Wax medallion portrait "drawn by his servant Dr. Van Eckhout" on May 25, 1784, and owned by the Pennsylvania Hospital.

Fig. 6. Silhouette of "Old Doctor Chovett" by Mary Hana. Part of the collection of The College of Physicians of Philadelphia.

Although this appears to be the only record of the proposed transaction, we have evidence that the transfer never went through. After Chovet's death, in 1790, the *Universal Asylum and Columbian Magazine* published "An Account of the Late Dr. Abraham Chovet." After lauding Dr. Chovet as a medical personage of great distinction, the author of this account gives the following editorial opinion:

"His anatomical preparations, which are extremely elegant, are monuments of great industry, as well as ingenuity. We hope, for the honour and benefit of our country, they will be purchased and preserved by one of the medical institutions of Philadelphia."

Philadelphia apparently responded to this suggestion with their own implemen-

tation of the value of Chovet's work. In *Morton's History of the Pennsylvania Hospital* the following account is given (12):

> "In 1793, the Managers acquired for the Museum a very remarkable collection of anatomical preparations, including dried, injected and painted specimens, together with a series of beautiful wax models by Dr. Abraham Chovet, by purchase from his heirs. The collection, especially the wax preparations, were regarded at that time as masterpieces of art".

Chovet's models were added to the Fothergill Collection to form a Museum that became one of the foremost scientific attractions of the city. Admission was charged and these fees became an important part of Pennsylvania Hospital's income.

George B. Wood, in "An Address on the Occasion of the Centennial Celebration of the Founding of the Pennsylvania Hospital," noted that the collection was transferred to the University of Pennsylvania in 1824 (12). By 1851, when Wood presented this oration, the Chovet and Fothergill collections had become a part of the Wistar Museum. However, most of the Chovet collection appears to have been destroyed in a fire that swept the Wistar Institute in 1888.

Abraham Chovet's contribution to Philadelphia medicine was both colorful and important. A *Guide for Medical Students* published in 1842, some years after his death, ranked Chovet third in importance only to the doctors Phineas and Thomas Bond, in a list of five individuals who were of major distinction on the city's medical scene. The *Guide* goes on to specify Dr. Chovet's contribution (13):

> "Dr. C. laid the foundation of public instruction in Obstetrics, by his elegant crayon illustrations of the progress of gestation, and his models in wax; which latter, though colored after the cadoric, and therefore less captivating to the idly curious, still display in their ruins the anatomical and physiological knowledge of their constructor, with greater regard to the dignity of science and the claims of good taste and good morals, than is evidenced in the more modern productors of the French and Italian School."

Another biographer wrote movingly of Chovet's death (5)

> "Shortly before he breathed his last he requested his family to give him a plain funeral, and by no means to have the bells, as was the custom at that time, rung for him: because he did not wish to have sick people disturbed by such an unnecessary noise . . . the sick people always fared well at his hands."

A man of humor and compassion, Chovet did a great deal to brighten the 18th-Century Philadelphia scene. His contributions to medicine were considerable, but he is remembered here as a "perfect original"—eccentric, controversial, and colorful (14).

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An Early 20th-Century Testicular Transplant[1]

By THOMAS N. HAVILAND, PH.D.,[2] AND
LAWRENCE CHARLES PARISH, M.D.[3]

ONE of the more libidinous episodes of the "Roaring Twenties" was the emergence of "monkey-gland" surgery. With this innovation, we commonly associate the names of the Viennese scientist, Eugene Steinach, and the French surgeon, Sergei Voronoff. Steinach experimented mainly with rodents and did not attempt human transplants, while Voronoff combined both animal and human experimentation, transplanting young human or "monkey" (chimpanzee or baboon) testicular tissue into the scrotal sacs of elderly men from 65 to 83 years of age, being careful to match blood types. The resulting euphoria of mental alertness, muscle tone, skin elasticity, and sexual potency did not stand the critical test of time, and the practice soon abated. It is well established in clinical circles that in some cases of infertility in both male and female, favorable response and similar euphoria have been elicited by improved conditions in dietary deficiencies, relaxation, and changed mental attitudes without any recourse to drug therapy. The essential error, leaving out for the moment the role of body rejection of the transplanted tissue, was the belief that the aging of the individual resulted from aging of the accessory genital organs, mainly the testicles. At this time (1920), as a sequel to the work of Brown-Séquard, it was commonly recognized that the testis was a gland of internal secretion controlling sexual changes at puberty. The testes have their own functional lifespan which is mainly devoted to the reproduction of the species and not to the maintenance of the body against the ravages of old age. No evidence has ever been produced that aging of the body as a whole is dependent on either the activity or failure of the sex glands themselves.

The idea of rejuvenation by utilization of the sexual organs of animals is an ancient belief. Historical records disclose that the priests and elders of ancient India and China consumed the sexual organs of animals to improve their own vigor and intellect as much as 3000 years ago. Indeed, as long ago as 1400 B.C., the testicles of sacrificial animals were being specifically used to counteract male sexual weakness (1). We find them mentioned as remedies and sexual stimulants by Pliny in the first century A.D. (2) and by Nicholas Culpeper in the 17th Century in his translation of the *Pharmacopoeia Londinensis* (3).

While John Hunter had experimented with testicular transplants in the chicken in the 18th Century (4), the scientific era of experimental rejuvenation essentially started with the reports of the above-mentioned physiologist Charles Edward Brown-Séquard, who, in 1889 at the age of 72, injected himself with "an extract of crushed testicles, semen, blood from the testicular veins, and distilled water!" The above organic material he obtained from dogs and guinea pigs. He claimed (5) a renewal of vigor and "enjoyment of life." One of the by-products of his experimentation and publication of more than 50 papers on this therapy may have been the flood of research

[1] Section on Medical History, The College of Physicians of Philadelphia, 3 November 1970.

[2] Associate Professor of Anatomy, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

[3] Associate in Dermatology, The School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, 19104; Associate in Dermatology, School of Veterinary Medicine, University of Pennsylvania; Visiting Assistant Professor of Dermatology, Yonsei University School of Medicine, Seoul, Korea.

which started a few years later on hormones with studies undertaken on the ovaries, pancreas, adrenals, pituitary, thyroid and parathyroids.

Actual organ transplanting had to await the pioneering work of Alexis Carrel in the beginning 20th Century on end-to-end anastomosis of blood vessels; after all, if an organ is to be transplanted, it must have a blood supply. Once he had perfected the technique and prevented clot formation, he advanced to the substitution of lost pieces of artery and vein and thence to the transplantation of entire organs from animal to animal (6). In addition to the many technical complications, frequently including sepsis, that often caused the death of the graft, Carrel and even the other workers before him, like Theodore Billroth (7) with skin grafts in the 19th Century and John Hunter in the 18th Century, became confused and failed to observe the true significance of the results between autotransplants and homotransplants. Many years were to pass before the gradual recognition that the rejection phenomenon was a basic biological principle.

Tissues had been transplanted from human to human (homotransplants) in the late 18th and early 19th Century when teeth from cadavers were placed in living patients' alveolar sockets—always with ultimate rejection. Indeed a brisk and profitable business sideline was developed by the body-snatchers to supply the dentists and tooth-drawers with cadaver teeth for transplantation. If a "resurrected" body was too decomposed for sale to the anatomists, the work was not in vain, because the teeth would be drawn from the jaws and realize a few guineas from the sale of them to a dentist. One enterprising ruffian realized a small fortune by visiting the continental battlefields during the Peninsular Campaign and pulling the teeth from the dead and dying (8). Skin, bone, and even organs, such as ears, noses, lips, and tongues were attempted to be transplanted, always unsuccessfully when homogenous; however, if we exclude technical complications and septic sequelae, when autogenous, success was sometimes attained—as witness Tagliacozzi in the 16th Century, the Branca family in Sicily in the 15th Century, and indeed Susruta, in India, was performing autogenous nasal plastic surgery about 600 B.C. These surgical specialties had developed because of the barbaric customs of punishment prevalent through many ages which consisted in cutting off noses and ears, sometimes even for quite minor offenses (9). Also organs and parts of organs had been transpositioned in the beginning 20th Century, but the following, as far as we have been able to learn, is the earliest transplantation of an organ from one human to another. While we can almost certainly predict the ultimate fate of the transplant, one still feels frustrated at being unable to locate the records pertaining to this case. The Methodist-Episcopal Hospital was unable to locate any of the records without the name of the patient, which was not given.

The paper, "An Abstract Report of a Case of Transplantation of a Testicle," by Drs. Levi J. Hammond and Howard A. Sutton, appeared in the Surgery Section of International Clinics (Philadelphia), Vol. 22, Ser. 1: 150–154, 1912, from which the following information is culled.

The patient was a young man about 19 years of age and on July 28, 1911, while asleep on the floor, had been playfully kicked in the scrotum by a 12-year-old boy. He experienced pain for about an hour and then forgot about it until several days later when he noticed considerable swelling. He called on Dr. Sutton on August 30, not because of any pain, but because of the inconvenience of the enlarged testis, which measured 10¼″ in the long circumference by 8″ in the transverse.

The patient was averse to any operative procedure and insisted that application of local measures be tried first. These were tried without beneficial effect, and with the

tumor rapidly increasing in size, he gave his consent for the operation to be performed on November 13, 1911. Drs. Hammond and Sutton had decided, for aesthetic as well as psychological reasons, to implant an artificial testicle and had elected to substitute the testicle of a live sheep. However, upon reflection on the matter, they reasoned that if they could successfully transplant a sheep's testicle, why not use a human organ rather than one from another species.

The successful results of experimental work in blood vessel anastomosis in lower animals and their desire to transplant a healthy human organ to replace the diseased one was explained to the patient and the matter was left entirely to his own decision. The offer was enthusiastically accepted by him. The reference to blood vessel anastomosis indicated that Hammond and Sutton were conversant with Alexis Carrel's work in this field a few years before (10).

Only a day before the scheduled operation was to be performed, a healthy human testicle was secured from a man 28 years old, who died of hemorrhage following rupture of the liver. Immediately upon removal from the donor, the vessels were flushed with normal sterile saline and the testicle was placed in a sterile jar in the above solution, sealed, and within nine minutes from time of removal from the donor, put in cold storage at 40°F, where it remained until 12:30 the following day (November 13), when it was transplanted. About 17 hours had elapsed between removal and implantation, about 19½ hours during which total physiological function had been suspended.

Here again Hammond and Sutton were apparently following the pioneer work of Alexis Carrel, for barely a year before Carrel had published his results on the preservation of blood vessels in cold storage for days or even weeks before using them in transplantation in dogs (11). Parenthetically, Sergei Voronoff more than a dozen years later in explaining his technique for grafting or transplanting baboon or chimpanzee testicles into humans, expressly cautioned against using cold storage, stating that the graft must be excised from the donor at the last practicable moment in order that normal circulation may be maintained as long as possible. Recall also that while Voronoff, writing in 1926, points out the importance of matching blood types of donor and recipient, no mention is made of such procedure in the present report (12, 13).

I shall not report on the operative details which can be gleaned from the report of the case as noted above, beyond saying that the scrotal incision was not closed at its most dependent point "where it was left gaping for the purpose of inspecting its subsequent course." A statement was made that arterial circulation was reestablished before the patient left the operating table. No postoperative shock was noted, nor any subsequent general systemic effect, as evidenced by a practically normal chart. No significant local symptoms occurred until the seventh day when slight bleeding occurred through the gap in the incision, and after several days, with careful traction daily, the tunica vaginalis of the donor was removed—that of the recipient having been left intact at operation.

As to foreign-body tolerance, I might observe that to my knowledge, in adult organisms, spermatozoa or their remnants or products, i.e., foetus, is the only foreign tissue tolerated by the recipient female, or is at least not subjected to phagocytic onslaught; were this not the case the human race would be non-existent, and we could quote a legend found on one of Frederick Ruysch's foetal skeletal preparations, "If I was so soon to be done for, Whatever was I begun for?"

The patient left the hospital twenty-three days after admission. Apparently union of the blood vessels was well established and circulation through the testicle completely adequate. Examination of the

patient four days after leaving the hospital revealed on palpation evidences of a beginning sensation. One month later to the great surprise and bitter disappointment of the surgeons, the transplant was very markedly atrophied, being only a small knob at the end of the cord. They querulously conjectured, "Was it due to an ultimate or late embolus or thrombosis or to the definite action of the embryologic tissues connected with repair following an early injury?"

Here the report ends—except for one last maddeningly tantalizing statement made about a month after the above remark: "Just before going to press, the patient was examined again, and there is evidently some increase in size since making our report; the organ which began to atrophy shows now at this date (February, 1912), increasing development."

To date, I have been unable to locate any follow-up on this case and, as stated above, have been unable to obtain any pertinent information from the Methodist-Episcopal Hospital, Philadelphia. With our present state of knowledge we can assume, with considerable assurance, that the transplant was ultimately rejected.

However, in 1970, Dr. Sun Lee and associates working at the University of California School of Medicine have made some advance in technique using rats. They have transplanted testes from one rat to another and in 5 of 85 recipients the grafts remained normal and viable offspring were produced by mating the recipient (14).

Dr. Levi J. Hammond obtained his Bachelor of Arts degree from Rutherford College, North Carolina, and his M.D. degree from the University of Pennsylvania in 1886, graduating with class honors. For 17 years he was associated with the University as First Assistant and later as Instructor in Aural Surgery. Though locally reputed to be the first surgeon to perform the operation of staphylorrhaphy, its first American recorded performance was by John Collins Warren of Harvard in 1828 (15). In 1912, Dr. Hammond was elected President of the Philadelphia County Medical Society and in 1917 Chairman, Surgical Section, State Medical Society, and Chief Surgeon and President of the Surgical Staff of the Methodist-Episcopal Hospital. Apparently, at this writing, he was the first surgeon to transplant the organ of a dead man into a living person.

Dr. Hammond died January 6, 1930 at his home on Spruce Street (16).

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Psychiatry in Venezuela: A Brief History

By HAROLD GRAFF, M.D.,[1] AND HUMBERTO BLANCO ACOSTA, M.D.[2]

PSYCHIATRY in Venezuela, like the nation itself, seems to have no past, only a present and a future. Spurred by the discovery and exploitation of its vast oil reserves, Venezuela has recently entered the list of the twenty richest countries in the world in terms of per capita income.

Its capital, Caracas, was not too long ago a quiet town of less than 200,000. Its present population is 2,000,000. Tall buildings and apartments line the new expressways, and the Sabana Grande, its shopping center, contains all the goods found in any large city of the United States. Psychiatry, unknown here fifty years ago as a medical discipline, has begun to experience a rapid growth, sharing in the new-found prosperity. Its history may serve to recapitulate, in microcosm, the history of psychiatry in the Western Hemisphere.

History

The history of psychiatry in Venezuela can be said to begin with the growth of the first psychiatric institution in Venezuela, the Asilo Nacional de Enajenados (National Asylum for the Alienated). Opened in 1876, it managed to stay in operation only sixteen years. The Asylum was forced to close because of inadequate professional staffing. Not one of its superintendents had any experience in dealing with the insane, and one of its directors was a Dr. Telmo Romero, widely known as an infamous charlatan (1).

Not long after the unlamented closing of the Asylum, a new facility, the Hospital Psiquiatrico Caracas (HPC) was opened, and is now in its seventy-seventh year. The HPC occupies its original location overlooking the center of Caracas with its new "Centro Símon Bolívar," the government complex. The Hospital blends the old and the new, traditional and modern in its plan. In comparison to the spacious campuses of mental hospitals in the United States, it seems crowded and tiny. Situated in the center of its grounds is the archway entrance to the original building, razed years ago. It remains as a memorial, much as the portico of the old Pennsylvania Hospital for the Insane stands as a memorial to Dr. Thomas Kirhbride, a founder of the American Psychiatric Association. In the new tradition of Caracas, the old structures at HPC are being demolished and replaced by the most advanced structures to utilize modern treatment techniques. Commanding the center of the hospital area is a modern theater (1967) designed both for psychodrama and the production of amateur theater.

HPC, as the nation's only complete large psychiatric hospital for many years, like the unlamented Asylum, necessarily served as the wellspring for the future of the specialty in Venezuela. It had a checkered career; for almost forty years HPC did not have a psychiatrist as its superintendent. Despite this lack, it entered a golden age led by a radiologist, Dr. Pedro Gonzalez Rincones, who headed it for many years. Today he is remembered by a commemorative bust in front of the newest hospital building. His successors have maintained his standard and read like a who's who of Venezuelan psychiatry. At this writing the superintendent is Dr. Pedro Perez Velasquez.

In 1907, a psychiatric hospital opened in

[1] Research Associate Professor of Psychiatry, Hahnemann Research Division, Eastern Pennsylvania Psychiatric Institute, Philadelphia, Pennsylvania; Attending Medical Staff, The Institute of the Pennsylvania Hospital, Philadelphia, Pennsylvania 19139.

[2] Assistant to the Director of Mental Health in Child and Adolescent Psychiatry, Ministry of Health, Caracas, Venezuela; Professor of Adolescent Psychiatry, El Piñón, Caracas, Venezuela.

Fig. 1. Hospital Psyquiatrico de Caracas, showing past, present and future phases of its development. The old building on the right will be torn down and replaced by new buildings like the one in the background. The archway on the left remains as a memorial entrance to the original building, razed years ago.

Maracaibo, the second largest city in Venezuela. Since it was very small, this hospital added little to the inpatient facilities available and served only as an emergency and screening center for HPC. These two hospitals were essentially the only psychiatric treatment centers for the entire country until the 1940's.

Present Hospitals

Based on revenues accrued from a wealthy economy, the government's Ministry of Health has been in a sound position to develop new psychiatric centers. Cities other than Caracas and Maracaibo have recently been the recipients of new hospitals, which now exist in Valencia, Barquisimeto and Cuidad Bolivar.

With the development of sister hospitals, the HPC need no longer act as the vortex of all psychiatry in Venezuela. It continues to serve as an inpatient facility for the capital city of Caracas and as the main emergency center for crisis intervention in this burgeoning metropolis.

Abruptly falling heir to the mountainside estate of the deposed dictator Marcos Pérez Jimenez in 1958, the new government wisely decided to turn the property into a modern psychiatric hospital. Commanding a magnificent vista on the hill across the valley from HPC, it has, in six years, become a new vital force in Venezuelan psychiatry. Its staff has been particularly oriented to dynamic psychiatry. Known as El Piñón (The Big Rock), it introduced adolescent psychiatry into the community and supports the first adolescent unit in Venezuela.

Currently, there are 6,600 psychiatric beds available to a population of 10,000,000. Of these, 5,000 are supported by the government directly through the Ministry of Health. This service includes all patient

Fig. 2. New adolescent building of El Piñón.

services and treatments, the salaries of the physicians being paid by the Ministry. Thus, 80% of all inpatient psychiatric services are free to the individual. The remaining 1,600 are maintained by some private psychiatric physicians for the convenience of wealthier patients. These are usually located in large private homes. A few of this group of beds can be supported by social security benefits (2).

Most outpatients, when referred for hospital treatment, however, lose their private physician and become a patient of the hospital. Practically speaking, this may mean he is treated by the same physician, since many private psychiatrists supplement their income through hospital positions and refer their patients to units on which they serve.

Other Mental Health Organizations

Venezuela has a relative lack of hospital beds for children or for the mentally retarded, a situation it shares with many other countries. Three organizations now care for the mentally retarded: a hospital in Valencia, providing sixty beds; a small day hospital in Caracas; and a private group, "Avepane," organized by a group of parents of mentally retarded individuals which is able to provide the best in school and vocational training.

Children and adolescents in an "abnormal situation" are sponsored and cared for by the Consejo Venezolano del Niño. This organization deals with cases of child abandonment, delinquency, police arrest, or inadequate parental care. It focuses its work within the age group from seven to eighteen. Unfortunately, its goals have been hampered by certain official opposition.

The single inpatient unit for children in the entire nation was formed only in 1964 by Dr. Blanco Acosta. It has space for 25 children. At present the only inpatient unit for adolescents, with 50 beds, is located at El Piñón. It was also organized by Dr. Blanco Acosta in 1968 and is now directed by him.

Geriatric problems are handled in a unique manner, the farm placement. This is considered a prime treatment modality for ambulatory aged or senile patients. Sponsored by or owned by individual psychiatrists, farm lands are maintained by the patients as a form of work therapy while they receive other necessary forms of medi-

cal or psychiatric care. Each farm can accomodate approximately 200 patients, and over 2,000 patients are currently being handled in this fashion. The cost of care is kept at 10 bolivars a day, or $2.50. At the same time, the aged indigent person is permitted the opportunity to retain some responsibility for himself with a measure of self-esteem.

Diagnostic Classification

The major cause of psychiatric hospitalization is schizophrenia. This should not be a surprise, considering the present level of education and sophistication of the population. It may be interesting to see how the new wealth, with its catalysis of education and experimental programs, will alter this in the future. Complicating the diagnostic picture is the high incidence of epilepsy, with various reports of its reaching 20% of initial consultations. Risquez (4, 5) has reported that 7.9 per 1,000 of the total population have had at least one seizure and that fully 22% of the total population are found to have signs of organic brain damage, with the Andes region of the country showing an even higher percentage. Others report the level of mental retardation reaching as high as 25% of the initial contacts, with this explained on an organic basis. Unfortunately, such diagnoses do not take into account the environment, especially of the lower classes with its high level of poverty and illiteracy. Of more than passing note is the low suicide rate, only one-fifth that of the United States, while the homicide rate is five times that of the U.S. Concomitantly, mania is found to be more prevalent than depression. The above findings fit into the concept of a culture which permits the expression of emotions and rewards certain types of acting out of aggressive and sexual drives in the expression of masculinity, "machismo."

Psychiatric Personnel

Psychiatry as a separate medical specialty had its beginning only as recently as the middle 1930's when a few physicians began to travel abroad to secure psychiatric training. The first neuropsychiatry courses in Venezuela itself began in 1948 (3). Now there are five training centers for psychiatry: the HPC, the Military Hospital, El Piñón, the Hospital Vargas and the University Hospital. However, only El Piñón currently provides regular yearly courses, despite its lack of a university affiliation. Its funds are received through the Ministry of Health. The other teaching units can offer courses only irregularly because of a lack of adequate funding. It forces many to secure training in other countries, among the most popular being the United States, Canada, England and Argentina. This may be a blessing in disguise, since it provides Venezuela, a small country, with a group of highly skilled practitioners familiar with the best treatment modalities and well able to use them.

The population of psychiatrists consists of about 200 physicians of which almost 70% are in Caracas. The majority are native Venezuelans and graduates of one of the five national medical schools. The practice of the specialty is limited by the lack of general acceptance by the population of the value and desirability of psychotherapy. They, as might be expected, retain the concept that psychiatrists deal only with the insane, and to see one is to be labeled as such. This also explains the high percentage of schizophrenia as the first contact diagnosis. It also makes follow-ups difficult to secure, since discharge from the hospital is viewed as tantamount to cure. With the above limitations to practice, many of the psychiatric community serve on the treatment staffs of the psychiatric hospitals, supplementing their salaries by private practice. Fortunately for them, the difficulty in securing patients is offset by a fee rate comparable to the United States.

By unspoken tradition the psychiatric community, as in other countries, divides itself into the organic school, which in-

cludes behavior therapy and drugs, and the dynamic school. Some members of the latter school have had a personal psychoanalysis, both in Venezuela and in other countries. A Venezuelan Analytic Society is growing and now has started a training institute. Despite its rapid growth, the specialty of psychiatry has not yet been formalized by a board. The Venezuelan Psychiatric Society, founded in 1942, publishes a magazine intermittently every several months.

At present the mental health community suffers from a lack of ancillary workers, nurses, occupational therapists and social workers. The University recently began a training program to provide personnel for these fields. A course for psychiatric nurses is given but, unfortunately, not on a regular basis, and so they are still in short supply. A hospital can generally provide one nurse for each shift, the rest of the staff supplemented by untrained aides.

Research has so far been neglected because of lack of funds, either from the government or private foundations. Thus, anyone who wants to engage in research must do so on his own time, supplying his own funding. Such a situation is retarding the development of a strong local tradition of psychiatry.

Even though it retains many of the handicaps of a small population, a society not yet oriented to concepts of mental health, a shortage of specialized facilities and a lack of sufficiently trained personnel, the practice of psychiatry in Venezuela still has a bright future. Its greatest assets are the new pervasive spirit of building and expanding, using the most modern methods and concepts, and the desire of the nation's psychiatrists to provide the most efficacious treatment to their patients.

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The Medicinal Herb Garden of The College of Physicians[1]

By FRANCES ELLIS PRICE[2]

THE Medicinal Herb Garden at The College of Physicians is located at 19 South 22nd Street, Philadelphia, Pennsylvania, and is maintained by the Philadelphia Unit of the Herb Society of America. A garden has more meaning and greater interest if we know its history. Space does not permit mentioning the names of all those who have worked in and contributed to this garden. The joy it gives is the product of these many efforts.

The idea of having an Herb Garden adjacent to The College of Physicians was first mentioned by Dr. Benjamin Rush at the founding of the College in 1787. One hundred and fifty years later after a formal garden had been built, the Philadelphia Unit was asked to maintain it as a Medicinal Herb Garden. With the restrictions of the War years, this became very difficult, but the members worked valiantly in their fight to make plants grow in the soot and dirt of the city. With better times in 1947, they became frustrated with the garden's limitations and the lack of opportunity for further development. Permission was granted by the College to use the overgrown land in back of the garden for an extension. Architectural plans were drawn and efforts made to raise money for this fine project. Unfortunately, a year later the College made plans to use part of the land for a new building and all work ceased on the project.

Six years later, when the new building was nearing completion, The College of Physicians appealed to the Philadelphia Unit to make the remaining area, a plot of 30′ by 85′, into an additional garden. This was a real challenge: a high brick wall with nothing to relieve it in the back, the old college building on one side and the rears of tall city buildings with their fire escapes on the other. Minimum sunlight and little air circulation added to the problems of city soot would make growing conditions even more difficult. Before anything could be done, neglected trees and shrubs would have to be removed. Undaunted, the Philadelphia Unit accepted this opportunity.

A committee worked diligently for six months studying how to create the most satisfying garden within these difficult surroundings and within the Unit's budget of $3,000. Charles Willing, the architect who had made the earlier plans, was again asked to serve. His design, the contractor's and nurseryman's estimates all had to be curtailed. Art galleries and museums were visited, and all types of garden ornaments were discussed.

Memorials, it was decided, would give greater interest and a wider scope to the dimensions of the garden. Thus, the new garden became a Memorial to Justice Owen J. Roberts, a nationally known man, who had been a friend and Honorary Member of the Philadelphia Unit. A small boulder was hauled from his former home in Chester County to mount the plaque. Four teak benches were given, honoring relatives and friends.

Finally, all plans were approved and work began in March 1956. The old garden, which has four formal beds edged with brick paths and the center motive, an astrolabe on a pedestal, was renovated with new

[1] Reprinted with permission from *The Potomac Herb Journal,* Vol. VI, No. 2, Summer 1970, published by the Potomac Unit of The Herb Society of America.

[2] Box 112, Rt. 1, Teal Point Road, Easton, Maryland 21601.

soil and thirty varieties of medicinal plants. The background planting of *Taxus cuspidata, Ilex crenata, Viburnum Opulus* and *Syringa* were pruned, moved or replaced for a more pleasing effect. Two *Buxus sempervirens* were placed at the College's side entrance to the garden.

The new garden opens up from the old with a well-proportioned gravel walk leading around an ivy bed with the Roberts Memorial at one end and Edward Fenno Hoffman's lovely bronze statue of a young girl at the other. The latter was not included in the budget, but given by the Unit. The four benches invite one to stop for a moment's reflection. The harsh background of the brick wall is softened by the vine *Ampelopsis* and three *Sophora japonica* trees, with their fragrant flowers in July. *Ilex crenata* encloses the garden with a pleasing curve at the end. Group plantings of several varieties of *Ilex* and *Virbunum,* two *Cornus mas, Magnolia virginiana, Chionanthus retusa, Hamamelis zuccariniana, Mahonia bealei* and *Rhododenron catawbiense* break the harsh building structures on either side and have interest for their medicinal properties. Three *Malus sargentii,* a gift from the nurseryman, add delight in the spring.

Progress did not go without incident. After everyone had approved the completed plans, the President of The College of Physicians became alarmed over the legality of using memorials. Eckley B. Cox, Jr. in 1911 had conveyed the land on which the garden is located as a gift to the college in the name of his uncle, Dr. Wharton Sinkler. Legal counsel interviewed Dr. Sinkler's children and found them entirely in sympathy with the plans of the Philadelphia Unit for the garden. The only legal stipulation is that any building erected on this ground must be a memorial to Dr. Sinkler. The Unit then proceeded with its plans.

The garden continues as a project of the Philadelphia Unit, The College of Physicians making a contribution towards its upkeep. Each year there are casualties, plants to be replaced, fresh soil to be brought in, gravel to be added to the walk, and in 1964 the statue was stolen. Fortunately the latter was insured, and a duplicate is bolted in a half a ton of cement.

The cooperation between The College of Physicians and the Philadelphia Unit of the Herb Society of America has made possible a rare and beautiful garden. Each year new inspiration creates ways to add to its charm, and each year those who have the opportunity of working in the garden have left something of themselves and are enriched by the experience. However, the real worth of the garden is realized when so many of the public come each day to enjoy the peace and quiet, the beauty of nature, and are inspired by the plant material to seek further knowledge. The interest and appreciation expressed by the Officers, Council and Fellows of The College of Physicians leaves no doubt that the relationship between the two organizations will continue.

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Acceptance Remarks on Receiving the William Wood Gerhard Medal of the Philadelphia Pathological Society[1]

By ERNEST E. AEGERTER, M.D.[2]

DR. BUTCHER, permit me to thank the members of this Society, and particularly its award committee chaired by Dr. Young, for the opportunity to deliver this, the 1970 William Wood Gerhard Oration. It represents the climax of a long and pleasant association with the Philadelphia Pathological Society. I became a member in 1936 and served nearly a decade as its secretary, then as its president. Over the years I was also a member of the committees that selected three of the past Gerhard Medal recipients, so it is a special honor for me to now receive this highest tribute from my fellow pathologists.

I have made some effort to stir the dust of history and compile a list of the names of earlier Gerhard medalists. Surprisingly, it was not an easy task, for, unless I fumbled one clue or another, no one had fully recorded their succession in print. Considering the importance of this Society and the significance of its deliberations, it was astonishing to discover this fact, so I now will tell what came to light in the way of names and dates. Perhaps one or more in the audience this evening can add to my findings and, if so, I would like to hear from them concerning this matter.

Dr. William Wood Gerhard (1809–72), for whom our gold medal and oration are named, was an illustrious figure in American medicine. A native of Philadelphia and graduate in medicine of the University of Pennsylvania (1830), he pursued postgraduate studies in Paris, France, and also visited medical centers in England, Scotland and Ireland. Returning home, he served as resident physician at the Pennsylvania Hospital from 1834–36 and was elected to the staff of Old Blockley in 1835. During many years of work in pathology and clinical medicine, Gerhard and his colleagues first clearly differentiated typhoid and typhus fevers, and he also wrote several significant articles on other infectious diseases and a useful textbook on diseases of the chest. He was for thirty years a highly respected teacher at his medical *alma mater*.

Dr. Gerhard was also a founder, and first president of the Pathological Society of Philadelphia in 1838; this body was the forerunner of our present organization. And he became a charter member of the Philadelphia Pathological Society when it was formed in 1857. The membership roster of this Society, active and honorary, has included through the years many of the most illustrious names associated with the discipline of pathology.

An oration and medal bearing the name of William Wood Gerhard were established in the year 1925 and endowed then by the doctor's descendants. The medal, designed by the physician-artist Dr. R. Tait McKenzie of Philadelphia, bears a bust of the honoree and the legend, "The Philadelphia Pathological Society Honors Zeal in Research." The first award, honoring Dr. William H. Welch of The Johns Hopkins University, took place at Philadelphia on November 12, 1925.

This initial conferral apparently set a precedent, for since that time those receiv-

[1] Presented at The College of Physicians of Philadelphia, 12 November 1970.

[2] Professor of Pathology, Temple University School of Medicine, Philadelphia, Pennsylvania 19140.

ing the Gerhard Medal have spent much of their energy in teaching some aspect of pathology. My list of awardees reveals a hiatus until the year 1931, when Dr. Simon Flexner was a recipient of the award. After that, there followed Drs. Paul Cannon, Jean Oliver, and E. B. Krumbhaar. More recently, others honored were Drs. R. Philip Custer and William E. Ehrich.

Aware of the stature and contributions of my predecessors in this series, it is a privilege for me now to present my address, "Summing Up Thirty Years of Bone Pathology."

The Mary Scott Newbold Lectureship: One Hundred Lectures (1917–1971)*

OF the College's current lectureships, the Mary Scott Newbold is the only one that was neither named for a physician nor founded by one. Established by Mr. Clement B. Newbold of Philadelphia in 1917, it serves eponymically as a memorial of his wife; indirectly, as a tribute to Fellows of the College who were their friends; most particularly, among these, Mr. Newbold's brother-in-law, Dr. William Taylor (1861–1936), a native of Maryland who became one of Philadelphia's leading surgeons. He was secretary of the Building Committee responsible for the erection of the present home of the College, which he served in numerous other important capacities, most notably as its President, 1919–21.

Mr. Newbold's donation, in this instance, was made for the express purpose of enabling the College to hear distinguished speakers, upon whom are laid no restrictions as to subject matter. The gift was so generous that it has frequently been possible for the College to hear two or more Mary Scott Newbold Lectures, on widely varying subjects, in a single year. Subject to approval by the Council, the lecturers are selected by an *ad hoc* committee of five Fellows, including, *ex officio,* the President and the Chairman of the Committee on Scientific Business. For this benefaction, among others, Mr. Newbold's name appears in the list of Eminent Benefactors on the north wall of the vestibule of the College building.

The Mary Scott Newbold Lecturers

I. 1917 A. T. McCormack**
II. 1919 Thomas W. Salmon
III. 1920 Alonzo E. Taylor
IV. 1921 Merritte W. Ireland**
V. 1921 Sir Robert McCarrison**
VI. 1921 William Romaine Newbold**
VII. 1922 Hans Zinsser**
VIII. 1922 G. Canby Robinson**
IX. 1922 Donald C. Balfour**
X. 1923 J. J. R. Macleod**
XI. 1923 Leon Asher**
XII. 1924 Arthur Biedl**
XIII. 1924 J. G. Fitzgerald**
XIV. 1924 John Hunter and N. D. Royle
XV. 1924 Willem Einthoven**
XVI. 1925 A. N. Richards**
XVII. 1927 Eugene L. Opie**
XVIII. 1927 George R. Minot**
XIX. 1928 Sir Humphrey Rolleston**
XX. 1928 Ralph Pemberton**
XXI. 1929 Joseph Barcroft**
XXII. 1930 Sir Wilfred Grenfell**
XXIII. 1930 Charles Singer
XXIV. 1930 Michel Weinberg**
XXV. 1931 W. J. M. Scott and J. J. Morton
XXVI. 1931 George B. Magrath**
XXVII. 1932 Sir Thomas Lewis**
XXVIII. 1932 F. J. Lang**
XXIX. 1933 Burton J. Lee**
XXX. 1933 Ronald T. Grant**
XXXI. 1933 Sir Andrew MacPhail**
XXXII. 1934 John B. Flick**
XXXIII. 1934 Walter B. Cannon**
XXXIV. 1935 C. U. Ariens-Kappers**
XXXV. 1935 C. N. H. Long***
XXXVI. 1936 Franklin L. Payne**; Leonard G. Rowntree**
XXXVII. 1936 Thomas M. Rivers**
XXXVIII. 1937 Hector Mortimer
XXXIX. 1937 Alphonse R. Dochez
XL. 1938 Harry Goldblatt**
XLI. 1938 Russell M. Wilder**
XLII. 1939 W. B. Castle**
XLIII. 1939 Claude S. Beck**
XLIV. 1939 William J. Kerr**
XLV. 1939 Alfred Blalock
XLVI. 1940 Tom Douglas Spies**
XLVII. 1940 Alvin F. Coburn**
XLVIII. 1940 F. J. Roughton; Arthur Parker Hitchens**
XLIX. 1941 Thomas T. Mackie**
L. 1942 E. D. Adrian
LI. 1942 René J. Dubos**
LII. 1942 C. Sidney Burwell**

* Compiled by W. B. McDaniel, 2d, Ph.D., Curator of Library Historical Collections, The College of Physicians of Philadelphia.

** Published in the *Transactions & Studies of The College of Physicians of Philadelphia.*

LIII. 1943 Carl F. Schmidt**
LIV. 1944 Eugene M. Landis**
LV. 1945 Charles C. Wolferth**
LVI. 1945 John Alexander
LVII. 1947 Robert E. Gross**
LVIII. 1947 Frank W. Hartman
LIX. 1948 Murray J. Shear
LX. 1948 Laurence H. Snyder**
LXI. 1949 Albert B. Sabin
LXII. 1949 Ian Aird
LXIII. 1950 Frederick A. Coller
LXIV. 1951 A. McGehee Harvey**
LXV. 1951 Charles C. Wolferth**
LXVI. 1952 André Simonart**
LXVII. 1952 Thomas Parran**
LXVIII. 1954 Dickinson W. Richards**
LXIX. 1954 Louis N. Katz**
LXX. 1955 Jonas E. Salk
LXXI. 1955 Robert B. Brown**
LXXII. 1956 Richard Lynn Varco**
LXXIII. 1956 Marshall E. Groover, Jr.**
LXXIV. 1956 Arthur T. Hertig**
LXXV. 1957 Maxwell Finland**
LXXVI. 1958 Robert A. Moore**
LXXVII. 1958 Lewis Thomas
LXXVIII. 1959 Charles M. Pomerat**
LXXIX. 1960 I. Arthur Mirsky
LXXX. 1960 H. S. Mayerson**
LXXXI. 1961 Ralph W. Brauer**
LXXXII. 1961 Wallace P. Rowe**
LXXXIII. 1962 John Eager Howard**
LXXXIV. 1963 Theodore E. Woodward**
LXXXV. 1963 Richard A. Kern**
LXXXVI. 1964 David M. Hume**
LXXXVII. 1964 Robert A. Good**
LXXXVIII. 1964 John E. Deitrick**
LXXXIX. 1965 Dirk Durrer**
XC. 1965 Jacques Genest**
XCI. 1966 Charles R. Scriver**
XCII. 1967 Eugene A. Stead, Jr.**
XCIII. 1968 "Drug Abuse" Forum**
XCIV. 1968 "Survival? Man and Water" Forum**
XCV. 1969 "Population Avalanche" Forum**
XCVI. 1969 Ralph Nader
XCVII. 1970 George C. Cotzias**
XCVIII. 1970 John H. Knowles**
XCIX. 1970 Leon H. Sullivan**
C. 1971 Bruno Bettelheim

Memoir of Francis H. Eaton 1894–1968*

By JOHN J. MIKUTA, M.D.

FRANCIS H. EATON was born on March 29, 1894, at Wellsboro, Tioga County, Pennsylvania. He had his premedical as well as medical education at the University of Pennsylvania, graduating from the School of Medicine in 1919. He continued his training with an internship at the Hospital of the University of Pennsylvania.

Following completion of his internship, Dr. Eaton practiced from an office in his home, at 4007 Chestnut Street, in West Philadelphia, until 1962. His practice was primarily Obstetrics and Gynecology, but he had a special interest in the urologic problems of women. He was chief of the section of Female Urology at the Hospital of the University of Pennsylvania throughout most of his professional life.

Dr. Eaton is survived by his wife, Margaret Wingate Eaton, a graduate of The School of Nursing of the Hospital of the University of Pennsylvania; a son, Edward H. Eaton, M.D., of Harrisburg, Pennsylvania; and a daughter, Louisa M. Gill. He is also survived by seven grandchildren.

His interests, aside from medicine, were ornithology and music. He was a member of the Philadelphia County Medical Society, The Obstetrical Society of Philadelphia, The Order of Masons, and the Sea View Country Club.

To those who knew and worked with Dr. Eaton, he was a fine example of a kindly, professional and courteous gentleman. He was always held in high esteem among his patients and colleagues, and his passing is a loss to all who had the privilege of knowing and working with him.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of Henry D. Freiman 1913–1970*

By HENRY J. TUMEN, M.D.

HENRY D. FREIMAN, M.D., died suddenly and unexpectedly on August 17, 1970. A sincere and devoted physician, Dr. Freiman was a native Philadelphian who was born in this city on November 5, 1913. In education and medical training he was also completely Philadelphian. The University of Pennsylvania granted Dr. Freiman his baccalaureate degree in 1934 and his medical degree in 1937. Internship and residency training were also in Philadelphia institutions. Later, following military duty which he completed with the rank of Major in 1946, Dr. Freiman returned to the Graduate School of Medicine of the University of Pennsylvania for additional training in internal medicine and gastroenterology. He then served on the staffs of the Albert Einstein Medical Center and the Philadelphia General Hospital; from 1951–56, he was a member of the faculty of the Woman's Medical College of Pennsylvania. At the time of his death, Dr. Freiman was active in the Department of Gastroenterology of the Albert Einstein Medical Center and had made a large contribution to the development of that department. He had become a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians and a Fellow of The College of Physicians of Philadelphia.

Dr. Freiman's primary medical interest was in gastroenterology, but he also maintained close contact with all aspects of internal medicine. He was a thoughtful and most competent and conscientious internist. He was a quiet and studious person with a keen sense of duty and responsibility to his profession and to his patients. Though he was unassuming in manner, his obvious integrity and high ethical standards won for Dr. Freiman not only the love and devotion of his patients but also the respect and trust of his colleagues.

Dr. Freiman is survived by his wife, Mrs. Rose Specter Freiman, and two sons, David and Marc, and a daughter, Harriet. Not only his family but all who were privileged to know Dr. Freiman share his family's sorrow at his untimely death.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of J. Walter Levering 1890–1970*

By EDWARD W. CAMPBELL, M.D.

J. WALTER LEVERING was born in Philadelphia on November 11, 1890, and died October 26, 1970, at the Abington Memorial Hospital after a protracted debilitating illness.

Dr. Levering, after graduating from the Northeast High School in 1907, earned a B.S. degree at the University of Pennsylvania; he received his M.D. degree at the University School of Medicine in 1914. A year of internship was spent at the Children's Seashore House in Atlantic City and the Episcopal Hospital in Philadelphia. He then served as House Officer and later as Chief Resident at the Pennsylvania Hospital from 1915 to 1917, when he entered the U. S. Army as a Captain for the duration of World War I.

Following his discharge from the service in 1919, he opened an office in Oak Lane for private practice. At this time he received an appointment to the Surgical Department of the Abington Memorial Hospital. Later he was appointed as Visiting Surgeon to the Germantown Hospital and to the Children's Seashore Home. During the thirties he limited his practice to general surgery and research. At 68 years of age he was appointed to the Emeritus Staff at Abington and retired from active practice in 1963 at 73 years of age.

His medical attainments during a very active practice were to become a Diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, a Fellow of The College of Physicians of Philadelphia and the Academy of Surgeons.

Dr. Levering was married to the late Alma Bains in 1917. They had two children. Alma and Walter traveled widely and had many avocational and civic interests. He was interested in the Abington Y.M.C.A. for many years and at one time served as its president. He was a member of the Jenkintown Rotary Club and served a term as its president. Dr. Levering was an ardent golfer and was interested in oil painting and sculpturing. At one time he attended classes at the Philadelphia Museum of Art for training in sculpture.

Dr. Levering lived a very active, useful and interesting life and was highly respected and admired as a friend and as an able surgeon.

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Memoir of J. Parsons Schaeffer 1878–1970*

By JOHN H. GIBBON, JR., M.D.

Jacob Parsons Schaeffer, a former President of The College of Physicians of Philadelphia, was a distinguished scholar and gentleman who served the cause of medical education in Philadelphia and Pennsylvania for many years. He was born in Shamokin Dam, Pennsylvania, on August 20, 1878, the son of George Keyser and Elizabeth (Long) Schaeffer. Shamokin Dam is a Susquehannah town. Dr. Schaeffer was actually raised on a small farm outside of the town. His family had limited means and to help the family's bank account Dr. Schaeffer passed a teaching examination for primary school before he was 21 years of age. He had attended a local one-room school in the Shamokin Dam area. After passing the examination he then taught in a similar one-room school.

He spent some of his spare time working with his uncle who was an undertaker, and it undoubtedly was here that he first developed his deep respect for, and interest in, the human body. To further his knowledge in this field he attended and was graduated from the United States School of Embalming in New York. Continuing his education, he attended the Key State Normal (since renamed Kutztown State College) where he received the B.E. degree in 1901 and the M.E. degree in 1903.

He became interested in medicine while teaching in the East Greenville schools where he met his future wife, Mary Mabel Bobb, to whom he was married August 5, 1903. Her father was a doctor and a druggist and presumably Dr. Schaeffer entered the University of Pennsylvania Medical School on the advice of his father-in-law, Dr. Bobb. Dr. Bobb in fact supported most of his medical school education. He received his M.D. degree in 1907. After a year of internship at the Hospital of the University of Pennsylvania, he again took up his studies of anatomy at Cornell University, where he earned the degree of Master of Arts in 1909 and Doctor of Philosophy in 1910. At Cornell he began his lifelong research into the anatomy of the upper respiratory system, notably the nose, paranasal sinuses, lachrymal apparatus and the olfactory organ.

His advance in academic life was rapid. He began to teach anatomy to medical students while still in Philadelphia. He continued his teaching at Cornell where he became an Assistant Professor of Anatomy. In 1911 he accepted a teaching position at Yale Medical School and there was made full Professor of Anatomy in 1912. In 1914 he accepted the position of Professor of Anatomy and Director of the Daniel Baugh Institute of Anatomy at the Jefferson Medical College of Philadelphia. He held this chair for the extraordinarily long period of 34 years, until 1948 when he retired to emeritus status.

Dr. Schaeffer's death on February 7, 1970 at the age of 91 ended a long and extraordinarily fruitful career. His life was dedicated to his teaching, research and his many voluntary obligations in the field of medicine. He was a devoted father and very loyal in all his family relationships. Although he would have liked to have his son Bobb become a physician he never insisted but gave his son every opportunity to work out his own distinguished career. Bobb Schaeffer,

* Read before The College of Physicians of Philadelphia, 3 February 1971. Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

Ph.D., is now Chairman and Curator of the Department of Vertebrate Paleontology of the American Museum of Natural History. Dr. Schaeffer is survived by his widow, Mary Bobb Schaeffer, a sister, Mrs. Helen Klopp, a brother, George, and his only son, Bobb; two grandchildren, Elizabeth Schaeffer Brickman and Richard White Schaeffer, and a great-granddaughter, Elizabeth Rachel Brickman.

During his long professional life, Dr. Schaeffer was always an active contributing member of societies concerned with anatomy and its ancillary disciplines, as well as associations concerned with medical education. In recognition of his distinguished contributions to anatomical research he was elected President of the American Association of Anatomists. Because of his reputation as an academician and a creative scholar, he was elected a member of the American Philosophical Society.

Dr. Schaeffer served this College of Physicians faithfully for many years in different capacities. He was a member of the Committee of the Mütter Museum for thirteen years, 1932–45, and Chairman of the Committee for the last eight of those years, 1937–45. He was elected President of The College of Physicians of Philadelphia in 1946 and held that office with distinction for three years. After serving a two-year term as Ex-presidential Counsellor, he was elected a Censor of the College, in which capacity he served for many years.

Dr. Schaeffer received a number of awards and medals. In 1931 he was awarded the Gold Medal of the American Medical Association for his basic studies on the paranasal sinuses and the lachrymal apparatus in man. The Philadelphia County Medical Society recognized his contributions to medicine by presenting him with the Strittmatter Award in 1944. Similarly St. Joseph's College bestowed on him the Clarence E. Shaffrey, S.J. Medal Award in 1959. Yale conferred on him an honorary M.A. degree in 1913, and he received an honorary degree of Doctor of Science from Susquehannah University in 1925. The same degree was also conferred on him by the Jefferson Medical College of Philadelphia in 1950. For many years he served as Chairman of the Faculty of the Jefferson Medical College. The Pennsylvania Medical Society made him chairman of its committee to promote medical research. Acting in this capacity he contributed greatly to the defeat of continuous legislative attempts to curtail and prohibit the use of animals in experimental medical research. He served the Anatomical Board of the Commonwealth of Pennsylvania variously as member, executive secretary and president from 1914 until his resignation in 1962—for 48 years, a remarkable acheivment.

Professor Schaeffer was the author of nearly 200 published papers. He published two books in his special field: *The Nose and Olfactory Organ in Man* and *The Nose, Paranasal Sinuses, Lachrymal Passageways and Olfactory Organ in Man.* The latter appeared in several editions and is considered to be the standard text in this field. He was co-author of *The Head and Neck in Roentgen Diagnosis* with three members of this college, Drs. Pancoast, Pendergrass and Hodes. He was a contributing author of Morris' *Human Anatomy* from its sixth through its twelfth edition and was the Editor-in-Chief of the 10th and 11th editions and Advisory Editor for the 12th edition.

With all these many accomplishments, Dr. Schaeffer will be remembered best by his students and colleages for the respect he commanded and the atmosphere of dignity which he created. Clad in his black anatomical gown, he would stride into the old clinic amphitheatre at the Daniel Baugh Institute to be immediately greeted with affectionate applause followed by respectful quiet. Dr. Schaeffer would then begin his

discourse on the anatomical subject of that day, interspersed with questions to "Mr. Man," designating one of the students sitting in a lower row with his long wooden pointer. All of us who were taught by Dr. Schaeffer will never forget the universal esteem in which he was held by the student body and the faculty. Despite his unflagging attention to the business at hand, there was often a kindly twinkle in his eye. He was never sarcastic to his students, according them the dignified treatment which he commanded himself. There was an old world courtliness about him which made improper language or coarse jokes quite impossible in his presence. Anatomy was a serious subject to him and no student of his could treat it lightly. With all these qualities he was one of the most beloved professors that I have ever encountered. There were many fine teachers among his colleages, but few were his equal.

Memoir of Michael G. Wohl 1889–1970*

By CHARLES R. SHUMAN, M.D.

IN each generation there are individuals who are endowed in the wisdom, the sense of responsibility to his fellows, and the moral strength to carry the torch of learning to new heights. It is they who perceive the need before it becomes the necessity, who can act resolutely to accomplish the task and advance toward new goals. Such a man was Michael G. Wohl, whose boundless energy and perceptive mind brought him to the front of the medical arena, particularly in the science of medical nutrition in which he excelled. His devotion to the nutritional aspects of medicine, coupled with an unquenchable desire to foster a wide appreciation within the profession for its importance, carried him through a life-long crusade in this field.

Dr. Wohl was born in the Ukraine in 1889 and was graduated from the Medico-Chirurgical College of Philadelphia in 1912. After internship at the Samaritan Hospital (later Temple University Hospital), he continued his post-graduate studies in Berlin in 1913, Columbia University in 1923 and the University of Vienna, 1927–28. After serving on the staff at Temple University School of Medicine, he moved to Omaha, Nebraska, where he was associated with Creighton University School of Medicine as Associate Professor of Clinical Pathology until 1927. While in Omaha, he served as Chief of Diagnostic Laboratories and Consultant in several hospitals in adjoining communities.

In 1928, Dr. Wohl returned to Philadelphia, rejoining the staff at Temple University School of Medicine as Associate Professor of Experimental Medicine and Chief of the Metabolic Clinic. In 1933 he was Chief of the first Diagnostic Clinic at Mount Sinai Hospital of Philadelphia. In 1932 he began a long and fruitful association with Philadelphia General Hospital, where he founded the Nutrition Clinic in 1949. This Clinic, with its succession of attending staff, dietitians and house officers, became a center of education in clinical nutrition in Philadelphia until his death. In 1932 Dr. Wohl became Associate Professor of Medicine and Chief of the Endocrine Clinic and advanced to Clinical Professor of Medicine in 1953, a post he held until his faculty retirement in 1960. He was Chief of Medicine at Northern Liberties Hospital from 1933 until its merger with Albert Einstein Medical Center, where he continued as senior Consulting Physician until his death. Not content with his emeritus status, he organized and was made Chief of Human Nutrition and Research Associates in the Division of Biological Chemistry at Hahnemann Medical College and Hospital from 1959 to 1964.

In 1942 he was made the first Chairman of the Committee on Nutrition, Metabolism and Endocrinology of the Philadelphia Medical Society. While in this post, he organized the Annual Symposium on Nutrition and Metabolism, which immediately became an important educational program for nutritionists, dietitians and physicians. As Chairman of the Commission on Nutrition for the Pennsylvania Medical Society, he produced in 1956 a *Manual of Standard Therapeutic Diets* which has been used widely in hospitals and by physicians throughout the state. He conceived and inaugurated a consultative dietetic service for promulgation of nutritional information as

* Prepared and published at the request of the Council of The College of Physicians of Philadelphia.

a function of the Commission. Dr. Wohl was a member of many scientific organizations, a Founding Fellow of the American Board of Internal Medicine, Fellow of the American College of Physicians, Fellow of The College of Physicians of Philadelphia, Fellow of the New York Academy of Science, a Founder and Member of the American Society of Clinical Pathology. He was a member of the Philadelphia County Medical Society, Pennsylvania Medical Society, American Medical Association, American Therapeutic Society, American Diabetic Society, American Association for the Study of Internal Secretions, American Association for the Advancement of Science, American Institute of Nutrition. He was also a member and one-time Chairman of the Solomon Solis-Cohen Medical Literature Society and a member of Phi Delta Epsilon Medical Fraternity, as well as a 32nd Degree Mason for over forty-five years.

Throughout his many years of clinical and teaching activities, he maintained a lively interest in nutritional and metabolic research. His works are published in more than 200 scientific articles and seven textbooks. Among the latter is *Modern Nutrition in Health and Disease,* written in collaboration with his long-time friend, Robert S. Goodhart, which continues in its latest edition to be a standard reference in the field. In addition he has served in editorial capacities for several journals and contributed sections to various nutritional guides and manuals.

Since 1924 he was one of a group of dedicated physicians whose activities ultimately led to the establishment of the Medical School of the Hebrew University on Mt. Scopus in 1934. He continued as Director of the American Jewish Physicians Committee and Chairman of the Executive Board of its Philadelphia Chapter.

In 1968 he was honored as Man of the Year by the Medico-Chirurgical College Alumni Association. In 1969 he was honored by the Philadelphia County Medical Society with the establishment of the Michael G. Wohl Annual Lectureship in the field of Metabolic Diseases and Human Nutrition.

He is survived by his wife and lifetime co-worker, Dr. Rose B. Wohl, by three sons, Dr. George T. (radiology), Dr. Joseph S. (dentistry) and Dr. Milton T. (orthopedic surgery), and by nine grandchildren.

Dr. Wohl throughout his remarkable career has inspired many co-workers and physicians with his unceasing efforts to teach, investigate and provide service in the finest traditions of medicine. He leaves behind a prodigous heritage which will continue to enlighten and encourage others following in the paths opened by his talents and determination.

Fellows

February 3, 1971

ELECTED

1967. Abbiss, Joseph W., St. Francis Hospital, 8th & Dupont Sts., Wilmington, Del. (19805)
1952. Abelson, Neva Martin, 220 Locust St. (19106)
1961. Adamson, William C., 1542 Susquehanna Rd., Rydal, Pa.
1968. Adams, Raymond E., 108 W. Collings Ave., Collingswood, N.J. (08108)
1926. Adler, Francis Heed, 8870 Towanda St. (19118)
1959. Adlin, Albert, 1512 Lindley Ave. (41)
1949. Aegerter, Ernest E., 3400 N. Broad St. (40)
1953. Agerty, H. Horst A., 1230 Burmont Rd., Drexel Hill, Pa. (19026)
1960. Ainsworth, Thomas H., Jr., 960 County Line Rd., Bryn Mawr, Pa. (19010)
1964. Albert, Seymour M., 255 S. 17th St. (19103)
1963. Albright, Edwin P., 512 E. Mt. Airy Ave. (18)
1967. Alexander, Charles M., 930 W. Sproul Road, Springfield, Pa. (19064)
1958. Alexander, John Deaver, 590 E. Chestnut St., Coatesville, Pa. (19320)
1962. Alexander, John Dewey, Jr., 330 S. 9th St. (7)
1935. Alpers, Bernard J., 111 North 49th St. (39)
1960. Ames, Mary D., 260 St. James Place (6)
1961. Amsterdam, Gerald H., 1201 W. Olney Ave. (19141)
1962. Annesley, William H., Jr., 39 Glendale Road, Upper Darby, Pa.
1961. Anthony, Russell A., 385 Lancaster Ave., Haverford, Pa.
1961. Aponte, Gonzalo E., 1025 Walnut St. (7)
1930. *Appell, Kenneth E., 206 Glenn Rd., Ardmore, Pa. (19003)
1968. Apple, Stanley B., 333 West State St., Trenton, N.J. (08618)
1971. Ardizone, Rohlo A., 1900 Spruce St. (19103)
1960. Arey, James B., 2600 N. Lawrence St. (33)
1959. Arkless, Henry A., 255 S. 17th St. (3)
1967. Armitage, Harry V., 400 E. 13th St., Chester, Pa. (19013)
1922. Arnett, John H., 2116 Pine St. (3)
1967. Aronson, Marvin E., Office of Medical Examiner, 13th & Wood Sts. (19107)
1952. Ash, Rachel, 326 S. 19th St. (19103)
1952. Aston, Melville J., 6 Circle Drive, Margate, N.J. (08402)
1944. Atkins, Joseph P., 1201 Knox Rd., Wynnewood, Pa.
1956. Atkinson, John B., 410 Township Line Rd., Havertown, Pa. (19083)
1935. Atlee, John L., Jr., 822 Marietta Ave., Lancaster, Pa. (17603)
1952. Atlee, William A., 822 Marietta Ave., Lancaster, Pa. (17603)
1963. Austrian, Robert, Hospital of the University of Pennsylvania (4)
1958. Ayella, Alfred S., Jr., 1213 S. Broad St. (47)
1937. Bacon, Emily P., 803 E. Darby Rd., Havertown, Pa. (19083)
1958. Baer, Samuel, 5123 N. Broad St. (41)
1952. Baier, Howard N., 1333 Chestnut St. (19107)
1959. Baird, Henry Welles, III., 2600 N. Lawrence St. (33)
1952. Baker, Howard W., 3401 N. Broad St. (40)
1963. Baker, Richard B., 1851 E. Allegheny Ave. (34)
1967. Baker, Richard P., Jr., Misericordia Hospital (19143)
1946. Baker, Walter W., 315 Glenn Rd., Ardmore, Pa. (19003)
1963. •Balin, Howard, 1323 Medical Arts Bldg., 1601 Walnut St. (19102)
1957. Baltzell, William Hewson, 1530 Locust St. (2)
1971. Bank, Arnold A., Albert Einstein Medical Center (Northern) (19141)
1969. Bannett, Aaron D., 1335-49 W. Tabor Rd. (19141)
1940. Barba, Philip S., 120 Erdenheim Road (18)

• S. Weir Mitchell Associate

1943. Barden, Robert P., 8835 Germantown Ave. (18)
1939. *Barnshaw, Harold D., 526 Cooper St., Camden, N.J. (08102)
1969. Baronofsky, Ivan D., 550 Washington St. #611, San Diego, Calif. (92103)
1957. *Barr, Stanley, 255 S. 17th St. (3)
1939. Bartle, Harvey, Jr., Glenbrook Medical Bldg., 864 County Line Rd., Bryn Mawr, Pa.
1963. Bassett, James G., 3300 Henry Ave. (19129)
1932. Batson, Oscar V., 3926 Pine St. (4)
1921. Bauer, Edward L., Alden Park Manor (44)
1933. Bauer, John T., 312 E. Second St., Moorestown, N.J.
1939. Baumann, Frieda, 200 N. Wynnewood Ave., Wynnewood, Pa.
1952. *Bedrossian, E. Howard, 4501 State Rd., Drexel Hill, Pa.
1935. Beerman, Herman, 255 S. 17th St. (3)
1942. Behrend, Albert, Coventry House, Valley Rd. & Coventry Ave. (19126)
1945. Behrend, Bernard, 5910 Greene St. (44)
1949. Beizer, Lawrence H., 419 South 19th St. (46)
1936. Bell, Benjamin Tertius, 1941 Woodland Rd., Abington, Pa.
1956. Beller, Martin Leonard, 1936 Spruce St. (3)
1947. Bellet, Samuel, 2021 Spruce St. (3)
1969. Belmont, Herman S., 249 N. Broad St. (19107)
1956. Belmont, Owen, 5723 No. Park Ave. (41)
1959. Berk, Nathaniel G., 2534 W. Cheltenham Ave. (50)
1951. Bernstine, J. Bernard, 255 S. 17th St. (3)
1965. Berry, Richard G., 1025 Walnut St. (19107)
1970. Berry, Robert E., 2222 S. Broad St. (19132)
1956. Berry, Theodore J., 164 Pennsylvania Ave., Bryn Mawr, Pa. (19010)
1967. Beyer, Karl H., Jr., Merck Sharp & Dohme Res. Labs., West Point, Pa. (19486)
1957. Biele, Albert M., 1530 Locust St. (19102)
1964. Biele, Flora H., 1103 Spruce St. (19107)
1918. Billings, Arthur E., 2020 Spruce St. (3)
1957. Birdsall, Thomas M., 255 S. 17th St. (3)
1969. Birtwell, William M., 614 E. Manoa Rd., Havertown, Pa. (19083)
1949. Bishop, Edward H., 811 Spruce St. (7)
1933. Bishop, Paul A., The Dorchester, 226 W. Rittenhouse Sq. (19103)
1970. Black, Herman M., Dept. Radiology, Graduate Hosp. (19146)
1944. *Blady, John V., Parkway House, 2201 Benjamin Franklin Pkwy. (30)
1970. Blain, Daniel, 2100 Clarkson Ave. (19144)
1960. Blake, Alton D., Jr., Bryn Mawr Medical Bldg., Bryn Mawr, Pa.
1952. Blake, Paul O., 273 N. Lansdowne Ave., Lansdowne, Pa.
1958. Blakemore, William S., 419 S. 19th St. (46)
1971. Blizzard, John J., 2200 Providence Road, Chester, Pa. (19013)
1917. Block, Frank B., A1124 Park Drive Manor (44)
1963. Block, Reuben, 1555 Haddon Ave., Camden, N.J.
1969. Blocklyn, Maurice J., School Lane, Rose Valley, Moylan, Pa. (19065)
1949. *Blumstein, George I., 2039 Delancey St. (3)
1929. *Bockus, Henry L., 250 S. 18th St. (3)
1928. *Boles, Russell S., Rittenhouse Plaza, 1901 Walnut St. (3)
1961. Bongiovanni, Alfred M., 1740 Bainbridge St. (46)
1948. Bookhammer, Robert S., 249 Hilldale Rd., Villanova, Pa. (19085)
1947. Bourland, Henry S., 2219 Garret Rd., Drexel Hill, Pa.
1961. Bouzarth, William F., Episcopal Hospital (19125)
1961. Bove, Frank A., 2301 Pennsylvania Ave. (30)
1968. Bowen, Thales, Jr., Lankenau Hosp. (19151)
1954. Bowers, Paul A., 2031 Locust St. (3)
1942. Bowie, Morris A., Bryn Mawr Medical Bldg., Bryn Mawr, Pa.
1963. Boyer, Randal A., Holy Redeemer Hospital, Meadowbrook, Pa.
1964. Brackin, John T., Jr., 773 Roslyn Ave., Glenside, Pa. (19038)
1965. Brady, Anna M., 3302 W. Queen Lane (19129)

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1959. Brady, Luther W., 230 N. Broad St. (19102)
1954. Bralow, S. Philip, Dept. Medicine, Jefferson Div., Phila. General Hosp. (19104)
1921. Bransfield, John W., 2031 Locust St. (3)
1948. Braun, William, 406 Cooper St., Camden, N.J. (08102)
1953. *Brav, Solomon S., 5575 N. Park Ave. (4)
1953. Breckenridge, Robert L., 414 Haddon Ave., Collingswood, N.J. (08108)
1964. Brenman, Arnold K., 8040 Roosevelt Blvd. (19102)
1966. Brent, Robert L., Jefferson Medical College (19107)
1961. Breslow, Irwin H., 1924 Panama St. (19103)
1946. *Briscoe, Clarence Conway, 811 Spruce St. (7)
1953. Brobeck, John R., Univ. of Pa. School of Medicine (4)
1958. Brody, Henry, Einstein Medical Center, York & Tabor Rds. (41)
1965. Brody, Jerome I., Graduate Hospital, 19th & Lombard Sts. (19146)
1952. Brody, Morris W., 2 W. Levering Mill Rd., Cynwyd, Pa. (19004)
1948. Brogan, Edmund J., 4601 Market St. (19139)
1958. Brooks, Frank P., Hospital of the Univ. of Pa. (4)
1932. *Brown, Claude P., 1930 Chestnut St. (3)
1967. Brown, Clement R., Jr., Chestnut Hill Hospital (19118)
1963. Browne, Laurence T., Presidential Apts., D126 (19131)
1961. Brunt, Manly Y., 111 N. 49th St. (39)
1939. Brust, Raymond M., 301 Mill Rd., Havertown, Pa. (19083)
1969. Bryant, Winston M., Jr., 5900 Spruce St. (19139)
1969. Buchheit, William A., 3401 N. Broad St. (19140)
1961. Buerk, Minerva S., Bryn Mawr Medical Bldg., Bryn Mawr, Pa.
1962. *Burgoon, Carroll F., Jr., Skin & Cancer Hospital, 3322 N. Broad St. (19140)
1940. *Burnett, W. Emory, 47 E. Righters Mill Rd., Narberth, Pa. (19072)
1962. Burney, Leroy E., Milbank Memorial Fund, 40 Wall St., N.Y., N.Y. (10005)
1966. Burns, William P., 3400 Spruce St. (19104)
1954. Burros, Harry M., 419 S. 19th St. (46)
1968. Burrows, Stanley, Cooper Hosp., Camden, N.J. (08103)
1966. Burstein, Frank, 8541 Bustleton Ave. (19152)
1970. Butcher, James, 51 N. 39th St. (19104)
1941. Butler, Miriam, Watersmeet, Glen Mills, Pa.
1957. *Butterworth, Thomas, 411 Walnut St., Reading, Pa.
1965. Byron, Harold J., Wyncote House, Wyncote, Pa.
1966. Cahn, Milton M., 1930 Chestnut St. (19103)
1957. Calhoun, John Alfred, Jr., 214 Elm Ave., Swarthmore, Pa.
1958. Cameron, Charles S., 235 N. 15th St. (2)
1962. Camishion, Rudolph C., Suite 303, Cooper Parkway West, N. Park Drive & Airport Highway, Pennsauken, N.J. (08109)
1952. Campbell, Edward W., Abington Memorial Hospital
1944. Campion, Richard J., Box 136, Springhouse, Ambler, Pa.
1964. Cancelmo, Jesse J., Jr., 337 W. Lancaster Ave., Wayne, Pa.
1970. Canino, Christopher W., 1900 S. Broad St. (19145)
1967. Carabasi, Ralph A., 255 S. 17th St. (19103)
1935. Carey, Lawrence S., 2241 Garrett Road, Drexel Hill, Pa.
1971. Carfagno, Salvatore C., 1401 De Kalb St., Norristown, Pa. (19401)
1970. Carmichael, Paul L., 601 E. Main St., Lansdale, Pa. (19046)
1959. Carrington, Elsie R., Woman's Medical College (29)
1960. Carroll, Robert T., 1015 Chestnut St., Jefferson Bldg., Room 803 (19107)
1917. Carson, John B., Newton Square, Pa.
1956. Carty, James Byron, 51 Hampden Rd., Upper Darby, Pa.
1956. Casey, Paul R., 8350 Roosevelt Blvd. (19152)
1943. Castigliano, S. Gordon, Central & Shelmire Aves. (19111)
1949. Caswell, H. Taylor, 3401 N. Broad St. (40)
1954. Cathcart, Richard T., Jefferson Hospital, 1025 Walnut St. (7)

* S. Weir Mitchell Associate

1950. •Chamberlain, Richard H., 3400 Spruce St. (4)
1939. Chamberlin, George W., Reading Hospital, Reading, Pa.
1967. Chambers, Richard A., 1025 Walnut St. (19107)
1966. Chamblin, William D., Suite 303, 3900 Powelton Ave. (19104)
1945. Chance, Burton, Jr., 4400 Baltimore Ave. (19104)
1958. Channick, Bertram J., 3701 N. Broad St. (19140)
1954. •Charny, Charles W., 2039 Delancey Pl. (3)
1966. Chernoff, Benjamin, 6901 Old York Rd. (19126)
1969. Chesnick, Reuben B., 517 Penn St., Camden, N.J. (08102)
1960. Chirico, Anna-Marie, Hosp. of Univ. of Pa. (4)
1966. Chisum, Melvin J., 245 N. Broad St. (19107)
1939. Ciccone, Emmet, F., 2000 Willowbrook Rd., Huntingdon Valley, Pa. (19006)
1960. Cinquino, Mario A., 1518 S. Broad St. (46)
1960. Clader, Stanley C., 825-A Glenbrook Ave., Bryn Mawr, Pa.
1951. Clagett, A. Henry, Jr., 515 W. Eighteenth St., Wilmington, Del. (19802)
1966. Clark, Gerald R., Elwyn School, Elwyn, Pa. (19063)
1962. Clark, James E., Crozer-Chester Med. Center, 15th & Upland Aves., Chester, Pa. (19013)
1951. Clark, John K., Regional Med. Program, Rm. 2201, 3401 Market St. (19104)
1947. Clark, Thomas William, 6 Moreland Circle (19118)
1963. Cleveland, Albert F., 615 Morgan Ave., Drexel Hill, Pa.
1958. Closson, Edward W., 2301 S. Broad St. (19148)
1969. Cohen, Erwin A., 6735 Harbison Ave. (19149)
1949. Cohen, Louis B., 1320 Arrott St. (24)
1970. Cohen, Norman N., Misericordia Hosp. (19143)
1953. Cohen, Robert V., 520 Spring Ave., Elkins Park 17, Pa.
1967. Cohen, Sarle H., 1201 W. Olney Ave. (19141)
1965. Cohn, Edwin M., 1351 Tabor Rd. (19141)
1964. Cohn, Herbert E., 829 Spruce St. (19107)
1970. Cohn, Ronald E., 4940 Frankford Ave. (19124)
1934. Collins, Leon Howard, Jr., 1236 Arwyn Lane, Gladwyne, Pa. (19035)
1949. Conger, Kyril B., 3401 N. Broad St. (40)
1971. Connor, Robert W., 601 E. Main St., Lansdale, Pa. (19446)
1961. Coon, Julius M., 1025 Walnut St. (7)
1945. Coonel, Pauline, 47 E. Mt. Pleasant Ave. (19)
1953. •Cooper, Donald R., Woman's Medical College, 3300 Henry Ave. (29)
1960. Cooper, Edward Sawyer, 6710 Lincoln Drive (19)
1947. Coppolino, John F., 22 Pickthorn Drive, Batavia, N.Y. (14020)
1952. •Corbit, John D., Jr., 414 Lankenau Medical Bldg. (19151)
1959. Cormey, George F., 3818 Chestnut St. (4)
1965. Cornelison, Floyd S., Jr., 1127 Walnut St. (19107)
1968. Cortes, Felix M., Temple Univ. Hosp. (19140)
1970. Cossa, John P., 1900 S. Broad St. (19145)
1940. Cowan, Thomas H., 1930 Chestnut St. (3)
1966. Cram, Robert H., 918 County Line Rd., Bryn Mawr, Pa. (19010)
1947. •Crane, A. Reynolds, Pennsylvania Hospital (7)
1952. Crellin, J. Antrim, 1930 Chestnut St. (3)
1970. Cresson, Samuel L., Lankenau Medical Building (19151)
1968. Crichlow, Robert W., 3400 Spruce St. (19104)
1955. Crist, Walter A., 211 N. 5th St., Camden, N.J.
1968. Croll, Millard N., Hahnemann Hosp. (19102)
1959. Cullen, Milton L., 1936 Cottman Ave. (19111)
1962. Cunningham, John D., 3400 Spruce St. (4)
1934. Custer, R. Philip, 643 Moreno Road, Narberth, Pa.
1958. D'Alonzo, Walter A., 1647 S. 15th St. (45)
1938. Dannenberg, Arthur M., Sr., 235 S. 15th St. (2)
1968. Daughtridge, Truman G., 8835 Germantown Ave. (19118)

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1969. Davidson, Jay H., 1002 Spruce St. (19107)
1953. Davie, John H., 216 N. Broad St. (19102)
1970. Davis, Charles M., Jr., 918 County Line Rd., Bryn Mawr, Pa. (19010)
1947. *Davis, C. Nelson, 524 Howe Rd., Merion Station, Pa.
1936. Davis, David M., 960 County Line Rd., Bryn Mawr, Pa. (19010)
1951. *Davis, J. Wallace, 135 S. 18th St. (3)
1961. Dawber, Bryan A., Penn Mutual Life Insurance Co. (5)
1963. Day, H. James, Temple University Hospital (19140)
1971. Deas, Thomas C., 3401 N. Broad St. (19140)
1935. *Deaver, J. Montgomery, Lankenau Medical Bldg. (19151).
1957. Decker, John Paul, Pennsylvania Hospital (7)
1957. Dees-Porch, Frances, Glendale Road & Chestnut Sts., Upper Darby, Pa.
1958. Deitz, George W., III, 2240 Pine Rd., Huntingdon Valley, Pa.
1952. DeLuca, Charles Q., 255 S. 17th St. (3)
1969. Denbo, Elic A., 300 Broadway, Camden, N.J. (08103)
1952. De Orsay, Ralph H., 1241 Lindale Ave., Drexel Hill, Pa.
1951. *De Palma, Anthony F., 248 S. 21st St. (3)
1963. Derham, Robert J., McClatchy Bldg., Upper Darby, Pa.
1966. deRivas, Carmela F., Stanbridge & Sterigere Sts., Norristown, Pa.
1969. Desiderio, Vincent C., 1907 S. Broad St. (19148)
1959. DeTuerk, John J., 2301 S. Broad St. (19148)
1971. Deutsch, Joel, Episcopal Hosp., Front & Lehigh Ave. (19125)
1959. Dickens, Helen O., University of Pa. Hosp. (19104)
1968. Dickensheets, James G., 223 S. 6th St., Camden, N.J. (08103)
1958. Dickstein, Benjamin, 6810 Castor (24)
1956. Dietrich, Herbert James, Jr., 801 Old Lancaster Rd., Bryn Mawr, Pa. (19010)
1952. Digilio, Victor A., 2200 St. James Place (17)
1963. DiMarino, Anthony J., 735 Delaware St., Paulsboro, N.J.
1960. Dinon, Louis R., 330 S. 9th St. (7)
1968. Di Palma, Joseph R., 235 N. 15th St. (19102)
1920. Doane, Joseph C., 5286 34th Ave., N., St. Petersburg, Fla. (33710)
1948. Dohan, Frances Curtis, 80 Princeton Road, Cynwyd, Pa.
1969. Dolphin, John M., 235 N. 15th St. (19102)
1954. Donaldson, James B., 3401 N. Broad St. (19140)
1967. Donnelly, Joseph C., Jr., Lankenau Medical Bldg. (19151)
1962. Dorman, Philip J., 220 Sycamore Mills Rd., Media, Pa. (19063)
1967. Dougherty, Malvin J., 34 Copley Rd., Upper Darby, Pa. (19082)
1964. Dratman, Mary B., Woman's Medical College, Henry Ave. & Abbottsford Road (19129)
1952. Drayer, Calvin S., 111 N. 49th St. (39)
1949. *Dripps, Robert D., 3400 Spruce St. (4)
1969. Drossner, Jacob L., 101 E. Cooper River Plaza, Pennsauken, N.J. (08109)
1935. Duncan, Garfield G., 330 S. 9th St. (7)
1966. Duncan, Theodore G., 330 S. Ninth St. (19107)
1953. Dupler, Donald A., 4028 Walnut St. (4)
1942. *Durant, Thomas M., Einstein Medical Center, N.D., York & Tabor Rds. (19141)
1962. D'Zmura, Thomas L., Presidential Apts., City Line Ave. & Presidential Blvd. (19131)
1969. Dzwonczyk, John, Jr., 5300 Cedar Ave. (19143)
1936. Easby, Mary Hoskins, R.D. 2, Shelburne, Vt. (05482)
1964. Eberlein, Walter R., 2222 Locust St. (19103)
1966. Ehrlich, George E., Albert Einstein Medical Center, N.D. (19141)
1956. *Eiman, John W., Abington Memorial Hospital, Abington, Pa.
1962. Eisenberg, Samuel W., 3536 N. Broad St. (40)
1959. Eisenhower, James S. D., Jr., 2704 Pacific Ave., Wildwood, N.J.
1958. *Eisman, Sylvan H., 3600 Spruce St. (4)
1959. Elias, Elmer J., 10 Monticello Ave., Trenton, N.J.
1949. Elkinton, J. Russell, Oak Lane, Moylan, Pa.

* S. Weir Mitchell Associate

1961. Elliott, Frank A., 807 Spruce St. (7)
1957. Ellis, Richard A., 255 S. 17th St. (3)
1955. Ellis, Samuel, 275 Bryn Mawr Ave., Bryn Mawr, Pa. (19010)
1939. Ellis, Van Mashburn, 1528 Spruce St. (2)
1928. Ellison, Richard T., Medical Office Bldg., 1245 Highland Ave., Abington, Pa. (19001)
1936. Ellson, J. Vernon, Glendale Road & Chestnut St., Upper Darby, Pa.
1937. *Elsom, Kendall A., Scott Paper Co. (13)
1932. Engel, Gilson C., Lankenau Medical Bldg. (19151)
1945. *English, O., Spurgeon, 449 Righters Mill Rd., Narberth, Pa.
1970. English, Thomas J., 1707 Ritner St. (19145)
1965. Epstein, Isadore S., 5219 Lebanon Ave. (19131)
1942. Erb, William H., Medical Bldg., Presbyterian-Univ. of Penna. Med. Center, 3910 Powelton Ave. (19104)
1957. Erdman, William James, II, 3400 Spruce St. (4)
1965. Erslev, Allan J., 1015 Sansom St. (19107)
1957. Etzl, Michael M., 9025 Frankford Ave. (14)
1955. Eyon, Harold K., Route 70 at East Gate, Barclay Farm, Haddonfield, N.J.
1968. Faludi, Georgina, Hahnemann Hosp. (19102)
1946. Farell, David M., 1912 Spruce St. (3)
1945. Farrar, George Elbert, Jr., 528 Scott Rd., Gladwyne, Pa.
1953. Farrell, Harry L., The Chatham, 135 S. 20 St. (19103)
1964. Faust, Herbert A., Paoli Memorial Hosp. Med. Bldg., W. Lancaster Ave., Paoli, Pa. (19301)
1936. *Fetter, Ferdinand, 322 S. 21st St. (3)
1945. Fetter, John S., 1980 Country Club Dr., Huntingdon Valley, Pa. (19006)
1952. *Fields, Harry, 133 S. 36th St. (4)
1959. Fineberg, Charles, Franklin Med. Bldg., 829 Spruce St. (19107)
1955. Finestone, Albert J., 3701 North Board St. (40)
1943. *Finkelstein, Arthur K., Graduate Hospital (46)
1955. Finkelstein, David, 419 S. 19th St. (46)
1955. *Finley, John K., 527 Welsh St., Chester, Pa.
1954. *Finn, Joseph L., 8014 Burholme Ave. (11)
1947. First, Arthur, 1714 Spruce St. (3)
1954. Fischer, Carl C., Oak Hill Apt. W-321, Narberth, Pa. (19072)
1950. *Fischer, H. Keith, School Lane House, 5450 Wissahickon Ave. (19144)
1962. Fisher, George R., III, 801 Spruce St. (7)
1958. Fisher, Robert M., 118 Airdale Rd., Rosemont, Pa.
1970. Fishman, Alfred P., Rm. 282 Gibson Bldg., HUP, 3400 Spruce St. (19104)
1956. Fite, Franklin K., Germantown Hospital (44)
1952. Fitts, William T., Jr., 3400 Spruce St. (4)
1971. Flandreau, Richard H., Media Clinic, Media, Pa. (19063)
1970. Fleischmajer, Raul, 230 N. Broad St. (19102)
1952. Flexner, Louis B., 248 Anatomy-Chemistry Bldg., Univ. of Pa. (4)
1928. *Flick, John B., 819 Black Rock Rd., Gladwyne, Pa.
1957. Fornwalt, George R., 47 Copley Rd., Upper Darby, Pa.
1954. Forster, H. Walter, Jr., 37 S. 20th St. (3)
1960. Foulger, John H., 601 Rockwood Rd., Wilmington, Del. (2)
1963. Fox, Eva F., Woman's Medical College (19129)
1963. Frank, Paul E., York Road & Summit Ave., Hatboro, Pa.
1963. Frank, Robert L., 1282 Rydal Rd., Rydal, Pa. (19046)
1955. Frayer, William C., Franklin Med. Bldg., 829 Spruce St. (19107)
1941. Frazier, William Doane, 419 Gilpin Rd., Narberth, Pa.
1952. Freed, Herbert, 255 S. 17th St. (3)
1956. Freeman, Joseph T., 8-A Rittenhouse Plaza (3)
1964. French, Gordon N., Univ. of Pa. Sch. of Medicine (19104)
1951. Friedman, Paul Sigmund, 1422 Chestnut St. (2)

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1960. Friedman, Sidney, 1740 Bainbridge St. (46)
1958. Friewald, Milton J., 222 S. 19th St. (3)
1955. Friedenberg, Zachary B., 133 S. 36th St. (4)
1958. Frisch, Frederick, 7 S. Dudley Ave., Ventnor City, N.J. (08046)
1937. Fritz, Herbert H., Pennswood Rd., Bryn Mawr, Pa.
1961. Frobese, Alfred S., Abington Memorial Hosp., Abington, Pa.
1953. Fruchter, Joseph M., The Philadelphian, 2401 Pennsylvania Ave. (19130)
1935. Fry, Wilfred Eyles, 1930 Chestnut St. (3)
1963. Furgiuele, Francis P., 5430 Greene St. (19144)
1937. Furlong, Thomas F., Jr., Times Medical Building, Ardmore, Pa.
1967. Futcher, Palmer H., 3930 Chestnut St. (19104)
1964. Galligan, William J., 2909 Garrett Road, Drexel Hill, Pa.
1954. Gambescia, Joseph M., 1322 Race St. (2)
1969. Ganz, Michael A., R.D. #2, Box 207, Perkasie, Pa. (18944)
1966. Garcia, Celso-Ramon, University Hospital (19104)
1969. Gardiner, George C., 907 Pine St. (19107)
1951. Garlichs, Richard W., 216 N. Manoa Road, Havertown, Pa.
1931. Garner, Vaughn C., 477 East Wadsworth St. (19)
1953. Garnet, James D., 807 Spruce St. (7)
1959. Gartland, John J., Rm. 201 Lankenau Med. Bldg., Lancaster & City Line Ave. (19151)
1950. Garvin, Eugene J., 533 S. 46th St. (43)
1958. Geckeler, George D., 22 W. Bells Mill Rd. (19118)
1952. Gefter, William I., Episcopal Hosp. (19125)
1969. Gehring, David A., Medical Arts Bldg., Suite 21, W. Red Bank Ave., Woodbury, N.J. (08096)
1935. Geist, Donald C., 510 Cynwyd Circle, Cynwyd, Pa. (19004)
1955. Gelfand, David, 1722 Pine St. (3)
1969. Gellhorn, Alfred A., 3400 Spruce St. (19104)
1965. Georges, Thomas W., Jr., 3400 N. Broad St. (19140)
1941. *Gershon-Cohen, J., 255 S. 17th St. (3)
1959. Gerson, Irvin M., Cedarbrook Apts., Cedarbrook Hills, Wyncote, Pa. (19095)
1968. Gerstley, Louis, III, 2534 W. Cheltenham Ave. (19150)
1955. Gettes, Bernard C., 128 Overhill Rd., Cynwyd, Pa.
1963. Giambalvo, Giacchino P., 6370 Church Rd. (19151)
1965. Gianakon, Harry G., 111 N. 49th St. (19139)
1934. *Gibbon, John H., Jr., 2103 N. Providence Rd., Media, Pa. (19063)
1939. *Gibson, Glen Gregory, 2031 Locust St. (3)
1944. Gifford, Edwards S., Jr., 1913 Spruce St. (3)
1956. Gilbert, Philip D., Cooper Hospital, Camden, N.J.
1967. Gilbert, Robert P., 1025 Walnut St. (19107)
1947. Giletto, Basil J., 2020 Locust St. (3)
1955. Gill, Robert J., 801 Spruce St. (7)
1952. Gilpin, Sherman F., Jr., 1023 Beury Building, 3701 N. Broad St. (40)
1965. Ginley, Thomas H., Jr., Presidential Apts. (19131)
1949. Ginsburg, Isadore W., 3401 N. Broad St. (40)
1958. Girsh, Leonard S., Benjamin Fox Pavilion, Jenkintown, Pa. (19046)
1954. Gislason, Gerhard J., 245 N. Broad St. (7)
1967. Glauser, Stanley C., 630 Richards Rd., Wayne, Pa. (19087)
1964. Gloeckner, M. Louise C., 110 E. Fourth Ave., Conshohocken, Pa.
1956. Goldberg, Harry, 7913 Rolling Green Rd., Cheltenham, Pa.
1970. Goldberg, Richard E., 1333 Buck Road, Feasterville, Pa. (19048)
1965. Goldburgh, Warren P., 1932 Spruce St. (19103)
1969. Goldman, Leonard I., Temple Univ. Hosp. (19140)
1965. Goodman, David H., 6816 Castor Ave. (19149)
1956. Goracci, Armando F., Medical Arts Bldg., Woodbury, N.J. (08096)
1968. Gordon, Jacob S., 5119 N. Broad St. (19141)

* S. Weir Mitchell Associate

1968. Gordon, Kenneth H., Jr., 1250 Upper Gulph Rd., Radnor, Pa. (19087)
1937. Gordon, William, 5345 Spruce St. (39)
1968. Gordy, Philip D., 1025 Walnut St. (19107)
1964. Gottlieb, Harry, 5603 Greene St. (19144)
1964. Gottlieb, Philip M., 818 Medical Arts Bldg., 16th & Walnut Sts. (19102)
1965. Gould, R. John, 441 Lombardy Rd., Drexel Hill, Pa. (19026)
1967. Gould, Robert A., 701 N. Pennsylvania Ave., Morrisville, Pa. (19067)
1956. *Gouley, Benjamin, 1201 W. Olney Ave. (19141)
1966. Gowen, George F., Misericordia Hospital (19143)
1957. Grahn, Henry Victor, 5132 Chester Ave. (43)
1966. Grant, B. David, 918 County Line Road, Bryn Mawr, Pa. (19010)
1965. Grassi, Michael O. A., 2038 Locust St. (19103)
1965. Greenbaum, Charles H., 6810 Castor Ave. (19149)
1940. Greene, Lloyd B., 326 S. 19 St. (19103)
1952. *Greening, Roy R., Harbor View Med. Center, 325 Ninth Ave., Seattle, Wash. (98104)
1955. Greenstein, Raphael H., 1710 Pine St. (3)
1941. *Groff, Robert A., Suite 2306–08 Medical Tower, 255 S. 17th St. (19103)
1952. *Grotzinger, Paul J., 2121 Valley Rd., Huntingdon Valley, Pa.
1952. *Grove, D. Dwight, 5025 N. Marvine St. (19141)
1966. Guthrie, Marshall B., 1500 Spring Garden St. (19101)
1945. György, Paul, Philadelphia General Hospital (19104)
1969. Haase, Gunther R., 3401 N. Broad St. (19140)
1935. Hadden, Samuel B., 135 S. 19th St. (19103)
1945. Hahn, George A., 255 S. 17th St. (3)
1967. Haines, Keith E., 300 S. Broadway, Camden, N.J. (08103)
1964. Hall, John H., 3401 N. Broad St. (19140)
1955. Hallahan, John D., 104 W. Front St., Media, Pa.
1951. Hallett, Joseph W., 136 S. 16th St. (2)
1961. Hammett, Van Buren O., 249 N. Broad St. (19107)
1967. Hammond, Jonathan A., 433 Bellevue Ave., Trenton, N.J. (08618)
1954. Hand, B. Marvin, 1801 Pennsylvania Blvd. (3)
1938. Hand, John G. 1724 Pine St. (3)
1964. Hanes, Robert B., Ashby Rd. & Chestnut St., Upper Darby, Pa. (19082)
1947. Hanes, William James, 218 E. Beechtree Lane, Wayne, Pa.
1963. Hanhausen, Edward H., 418 E. Lancaster Ave., Wayne, Pa. (19087)
1950. Hansen, A. Victor, 910 Centennial Rd., Penn Valley, Narberth, Pa. (19072)
1970. Hardesty, William H., 433 Bellevue Ave., Trenton, N.J. (08607)
1951. Harkins, Herbert P., Suite 122 Lankenau Hosp. Med. Bldg. (19151)
1966. Harner, Richard N., Graduate Hospital (19146)
1963. Harris, Charles, 5301 Old York Road (41)
1962. Harris, James R., 3222 W. Penn St. (19129)
1959. Harris, James S. C., Medical Office Bldg., 666 E. Penn St. (19144)
1948. Harris, T. N., 5112 Woodbine Ave. (31)
1929. Harrison, Francis G., 1900 Spruce St. (3)
1961. Harvie, Fred H., 3400 Spruce St. (4)
1935. *Haskell, Benjamin F., 1427 Spruce St. (2)
1968. Haskin, Marvin E., 2461 N. 54th St. (19131)
1958. Haupt, George J., Lankenau Medical Bldg. (51)
1960. Hausman, David H., Pennsylvania Hospital, 8th & Spruce Sts. (7)
1947. Havens, Walter Paul, Jr., 139 Cheould Lane, Haverford, Pa.
1947. *Hawthorne, Herbert R., 3625 Darby Rd., Bryn Mawr, Pa. (19010)
1963. Hayes, Merrill B., 710 Madison St., Chester, Pa.
1952. Hayllar, Benjamin L., Bryn Mawr Med. Bldg., Bryn Mawr, Pa. (19010)
1961. Hayward, Malcolm L., 111 N. 49th St. (39)
1961. Heath, Frederick K., Merck Sharp and Dohme, West Point, Pa.
1957. Hedges, Thomas R., Jr., 330 South 9th St. (7)

* S. Weir Mitchell Associate

1961. Heggestead, Gilman E., 207 Bryn Mawr Bldg., Bryn Mawr, Pa. (19010)
1965. Heil, Charles G., Jr., The Benson East, Jenkintown, Pa. (19046)
1965. Heine, William I., 5579 N. Park Ave. (19141)
1967. Helwig, John, Jr., Germantown Hosp. (19144)
1944. Herbut, Peter A., Dept. of Pathology, Jefferson Medical College Hospital (7)
1954. Herron, James R., 1486 Haddon Ave., Camden 3, N.J.
1963. Hesch, Joseph A., Mercy Catholic Med. Center, Darby, Pa. (19023)
1949. Heyl, W. Meredith, Medical Office Bldg., 666 E. Penn St. (19144)
1961. Hilferty, Daniel J., Jr., Apt. 506, 191 Presidential Blvd., Bala-Cynwyd, Pa. (19004)
1952. Hinkson, DeHaven, 329 N. 40th St. (4)
1924. Hirst, John C., 2d., 2016 Rittenhouse Sq. (19103)
1943. Hitschler, William J., Bethlehem Pike & Summit (18)
1944. Hneleski, Ignatius S., 802 S. 48th St. (43)
1943. Hockaday, Agnes, 316 Shadeland Ave., Drexel Hill, Pa.
1939. *Hodes, Philip J., Dept. of Radiology, Jefferson Medical College (7)
1947. *Hodges, John H., 1025 Walnut St. (7)
1963. Hoffman, Carl J., 2901 Cottman Ave. (19149)
1948. Hoffman, George L., Jr., 133 S. 36th St. (4)
1965. Holfelner, Edward D., Chestnut St. & Ashby Road, Upper Darby, Pa.
1964. Hollander, George, 3500 Vista St. (36)
1949. Hollander, Joseph L., 36th & Spruce Sts. (4)
1969. Hollender, Marc H., Dept. Psychiatry, Vanderbilt Univ., Nashville, Tenn. (37203)
1964. Holling, Herbert E., 3400 Spruce St. (19104)
1951. Hollis, Charles B., The Cambridge Apts. (19144)
1952. Holloway, Edward E., 1736 Pine St. (3)
1966. Holly, Roy G., 1025 Walnut St. (19107)
1966. Holter, F. Robert, 1911 Spruce St. (19103)
1971. Hooper,William E., 3401 N. Broad St. (19140)
1949. Hopkins, Henry U., Garden Court Plaza, 47th & Pine Sts. (43)
1953. Horan, Charles A., 734 N. 63rd St. (19151)
1946. Horan, Gerald W., Marple-Newton Medical Bldg., Newton Square, Pa.
1947. *Horwitz, Orville, Pennsylvania Hosp., 8th & Spruce Sts. (19107)
1950. Houlihan, Carl T., 819 Gatemore Rd., Bryn Mawr, Pa. (19010)
1944. Housel, Edmund L., 255 S. 17th St. (3)
1958. *Howard, John M., 230 N. Broad St. (2)
1964. Howell, Doris A., 3300 Henry Ave. (19129)
1946. Howson, John Yeatts, 115 Bloomingdale Ave., Wayne, Pa. (19087)
1951. Hubbard, John P., 3930 Chestnut St. (19104)
1947. *Huber, John Franklin, Temple University School of Medicine (40)
1937. Hughes, Joseph, 111 N. 49th St. (39)
1939. Hughes, P. Boland, 419 Hillbrook Rd., Bryn Mawr, Pa.
1968. Hume, H. Alan, 3 E. Ridley Ave., Ridley Park, Pa. (19078)
1968. Hummeler, Klaus, Children's Hosp. (19146)
1951. Hundley, J. Warren, 3818 Chestnut St. (4)
1954. Hunsicker, William C., Jr., 255 S. 17th St. (3)
1946. Hunt, William T., Jr., Suite 945, 1617 J. F. Kennedy Blvd. (19103)
1921. Hunter, Robert John, 928 N. 63rd St. (19151)
1967. Huth, Edward J., American College of Physicians, 4200 Pine St. (19104)
1952. Hyman, Harold L., 3401 N. Broad St. (40)
1950. *Imbriglia, Joseph E., 934 Cedar Grove, Wynnewood, Pa. (19096)
1949. Ingraham, Norman R., Jr., Stenton and Whitemarsh Aves. (18)
1957. Isaacson, Howard, Haverford Ave. & Drexel Rd. (19151)
1951. *Isard, Harold J., Albert Einstein Medical Center, York & Tabor Rds. (19141)
1951. *Israel, Harold L., 1825 Pine St. (19103)
1947. *Israel, S. Leon, 807 Spruce St. (7)
1967. Jacoby, Jay J., 1025 Walnut St. (19107)

* S. Weir Mitchell Associate

1967. JAEGER, EDWARD A., Media Clinic, Media, Pa. (19063)
1965. JENKINS, B. WHEELER, 1526 E. Upsal St. (19150)
1960. JENSON, WILLIAM K., 6 Fitzgerald Mercy Hospital, Lansdowne & Darby Road, Upper Darby (19023)
1943. *JOHNSON, JULIAN, 3400 Spruce St. (4)
1959. JOHNSON, ROBERT G., 1015 Walnut St. (7)
1938. JOHNSON, THOMAS A., 135 S. 18th St. (3)
1963. JONES, ROBERT E., 111 N. 49th St. (39)
1967. JONES, W. MEAD, Somerset House, Fort Washington, Pa. (19034)
1963. JOSEPH, ROSALINE R., 3401 N. Broad St. (40)
1966. *JOYCE, JOHN J., III, Medical Office Bldg., 666 E Penn St. (19144)
1961. JOYNER, CLAUDE R., JR., 3400 Spruce St. (4)
1957. KACHER, LEON, 2037 Pine St. (3)
1969. KAIN, THOMAS M., JR., Cooper Parkway W., Suite 301 N. Park Dr., Pennsauken, N.J. (08109)
1948. KAPLAN, LOUIS, 2040 Pine St. (3)
1964. *KAPLAN, S. RICHARD, 419 S. 19th St. (19146)
1970. KASHATUS, WILLIAM C., 230 N. Broad St. (19102)
1966. KASSAY, DEZSO, 1 Summit St. (19118)
1958. KASSER, MAX D., 101 S. 20th St. (19103)
1970. KASTOR, JOHN A., HUP, 3400 Spruce St. (19104)
1945. KATZ, G. HENRY, 111 N. 49th St. (39)
1941. KAUFFMAN, M. LUTHER, Medical Arts Bldg., Jenkintown, Pa.
1947. KAY, CALVIN FREDERICK, Univ. of Pa. Hospital (4)
1954. KAYE, ROBERT, Children's Hospital, 1740 Bainbridge St. (46)
1968. KEATES, EDWIN U., 2385 Cheltenham Ave. (19150)
1947. KEEFER, GEORGE PFAHLER, 136 S. 16th St. (2)
1970. KEELER, LOUIS L., JR., 501 Haddon Ave., Haddonfield, N.J. (08033)
1963. KEELEY, FRANCIS X., Professional Bldg., 1533 Haddon Ave., Camden, N.J.
1966. KEENEY, ARTHUR H., Wills Eye Hospital (19130)
1949. KEISERMAN, JOSEPH, 1900 John F. Kennedy Blvd. (19103)
1965. KELLOW, WILLIAM F. T., 1025 Walnut St. (19107)
1932. *KELLY, HERBERT T., 1830 Delancy Place (19103)
1961. KELLY, WILLIAM E., 111 N. 49th St. (39)
1941. KENNEDY, PATRICK J., 32 Hampden Rd., Upper Darby, Pa.
1948. KERN, FRANKLIN MOORE, 903 Nicholson Rd., Wynnewood, Pa.
1921. *KERN, RICHARD A., Temple University Hospital, 3401 N. Broad St. (40)
1935. KEYES, BALDWIN L., 2031 Locust St. (3)
1971. KIMBEL, PHILIP, Albert Einstein Medical Center (N) (19141)
1936. KING, ORVILLE S., 330 S. 9th St. (7)
1970. KING, WARREN E., JR., 230 N. Broad St. (19102)
1952. KIRSCHNER, JACOB J., 1930 Chestnut St. (3)
1969. KISSICK, WILLIAM L., Dept. Community Med., 36th & Hamilton Walk (19104)
1960. KITCHELL, J. RODERICK, Abington Hospital Medical Office Bldg., 1245 Highland Ave., Abington, Pa. (19001)
1954. KLIGMAN, ALBERT M., 36th & Spruce Sts. (4)
1934. KLINE, ORAM R., 896 Lake Ave., Woodbury Hts., N.J. (08097)
1959. KLINE, ORAM R., JR., 406 Cooper St., Camden, N.J. (08102)
1948. KLINGENSMITH, PAUL O., Suite 305 Wynnewood House, 300 E. Lancaster Ave. Wynnewood, Pa. (19096)
1958. KLINGENSMITH, WALTER C., 3600 Spruce St. (4)
1956. KLINGHOFFER, JUNE F., Woman's Medical College (29)
1969. KLINGHOFFER, LEONARD, 255 S. 17th St. (19103)
1960. KNOPF, CARL L., 5312 Spruce St. (39)
1960. KNORR, JOHN K., 3rd Lankenau Medical Bldg. (19151)
1959. KNOWLES, HARRY J., 722 Righters Mill Rd., Narberth, Pa. (19072)

* S. Weir Mitchell Associate

1969. Koblenzer, Peter J., 303 Chester Ave., Moorestown, N.J. (08057)
1959. Koiwai, Eichi Karl, 235 N. 15th St. (2)
1957. Koltes, John A., 530 Spring Lane (19128)
1936. Konzelmann, Frank Williamson, 27 W. Wilmont Ave., Somers Point, N.J. (08244)
1949. *Koop, C. Everett, 1740 Bainbridge St. (46)
1964. Koppel, Max M., 7310 Castor Ave. (19115)
1952. Kornblueh, Igho H., Welsh Rd. & Verree Rd. (15)
1958. Kovach, Coleman W., 1830 Rittenhouse Sq. (19103)
1941. Krall, J. Thomas, 85 N. Landsdowne Ave., Landsdowne, Pa.
1954. *Krasnoff, Sidney O., Tabor Medical Bldg., York & Tabor Roads (41)
1952. Kravitz, Charles H., 626 Ashbourne Rd., Elkins Park, Pa.
1964. Kremens, Victor, 5601 N. Broad St. (19141)
1949. Kressler, Robert J., 330 S. 9th St. (7)
1968. Krishna, Narendra, 584 E. Chestnut St., Coatesville, Pa. (19320)
1947. Kuhlenbeck, Hartwig, Woman's Medical College, 3300 Henry Ave. (29)
1964. Kustrup, John F., 1418 S. Broad St., Trenton, N.J.
1967. Kyle, George C., 3400 Spruce St. (19104)
1947. La Boccetta, Alfred Charles, Philadelphia General Hospital, 34th St. & Curie Ave. (4)
1952. *Lachman, John W., 3401 N. Broad St. (40)
1946. Lampe, William T., 4207 Tyson Ave. (35)
1962. Landis, Harry P., Jr., 901 Columbia Ave., Palmyra, N.J.
1952. *Lang, Warren R., Suite 1624, 1919 Chestnut St. (19103)
1966. Langfitt, Thomas W., 3600 Spruce St. (19104)
1941. Langner, Paul H., Jr., 1208 Edmonds Ave., Drexel Hill, Pa.
1945. Lansbury, John, 3414 Brae Bourn Drive, Huntingdon Valley, Pa. (19006)
1926. Laws, George M., 1907 Spruce St. (3)
1967. Lear, Walter J., Deputy Health Commissioner, 540 Municipal Service Bldg. (19107)
1950. Learner, Norman, 370 N. Broad St. (40)
1920. Leavitt, Frederic Headley, 1527 Pine St. (2)
1941. Leberman, Paul R., Hospital of the University of Pennsylvania (4)
1957. Lee, Charles Trumbull, Jr., 33 E. Chestnut Hill Ave. (18)
1952. *Lehman, J. Stauffer, 3911 Central Ave., Ocean City, N.J. (08226)
1961. Leibfried, Jane M., 5501 Green St. (44)
1951. Leivy, Frank E., Wm. Penn House, 1919 Chestnut St. (19103)
1944. Lell, William A., 333 S. 18th St. (3)
1935. Lemmon, William T., 133 S. 36th St. (4)
1969. Lentz, John W., 417 Lankenau Med. Bldg., Lancaster & City Line Ave. (19151)
1965. Leopold, Howard C., Suite C-M1, Cedarbrook Hill Apt. 111, Greenwood Ave. & Limekiln Pike, Wyncote, Pa. (19095)
1955. Leopold, Robert L., Univ. of Pa. Hosp. (19104)
1967. Leslie, W. Munroe, 8800 Germantown Ave. (19118)
1969. Leto, Francesco, 1419 S. Broad St. (19147)
1944. Lettiere, Anthony J., 425 E. State St., Trenton, N.J.
1970. Leute, Millard S., INA, 1600 Arch St. (19101)
1965. Levenson, Carl, 619 Elkins Ave. (19117)
1959. Levick, Leonard J., 1335 Tabor Rd. (19141)
1958. Levine, Samuel, 7100 N. 19th St. (26)
1964. Levit, Edithe J., 3930 Chestnut St. (19104)
1964. Levit, Samuel M., 1910 Spruce St. (19103)
1958. LeWinn, Edward B., Upper Black Eddy, Pa. (18972)
1960. *Lewis, George C., Jr., 230 N. Broad St. (2)
1967. Lewis, Stuart H., 2050 W. Chester Ave., Havertown, Pa. (19083)
1964. Leymaster, Glen R., Woman's Medical College, 3300 Henry Ave. (19129)
1967. Liachowitz, Claire H., Graduate Hospital (19146)
1955. Liberman, George E., 1900 Spruce St. (19103)
1970. Liebman, Emil P., 2106 Spruce St. (19103)

* S. Weir Mitchell Associate

1968. Lief, Harold I., 2d Floor, 4025 Chestnut St. (19104)
1969. Lightfoot, William P., Temple Univ. Hosp. (19140)
1956. Likoff, William, 7201 Sherman St. (19119)
1962. Lilley, George W., Scott Paper Co. (19113)
1940. Limberger, William A., 301 S. Church St., West Chester, Pa.
1948. Lin, David Y. P., 2222 S. Broad St. (45)
1966. Lin, Paul M., The Benson, Suite 123, Jenkintown, Pa. (19046)
1938. Lindauer, M. August, 133 S. 36th St. (4)
1956. Lindquist, John N., 422 Sabine Ave., Wynnewood, Pa.
1936. Lintgen, Charles, 1930 Chestnut St. (3)
1958. Lipshutz, Arthur, 7974 Fayette St. (19)
1959. *Lipshutz, Herbert, 829 Spruce St. (19107)
1953. Lipsius, Edward I., 319 S. 16th St. (3)
1959. Little, Ralph B., 111 N. 49th St. (39)
1944. Livesey, Mary M., 8835 Germantown Ave. (19118)
1936. Llewellyn, Thomas H., 910 N. 63rd St. (19151)
1907. Lodholz, Edward, The Fairfax, 43rd & Locust Sts. (4)
1933. Long, Esmond R., Society Hill Towers, 23B, 220 Locust St. (19106)
1951. Long, Joseph P., 1930 Chestnut St. (3)
1935. Long, William L., 2038 Locust St. (3)
1931. Longaker, Edwin P., 41 E. Montgomery Ave., Ardmore, Pa.
1951. Lorber, Stanley H., Temple Univ. Hospital, 3401 N. Broad St. (19140)
1961. Lorry, Ralph W., 1247 E. Luzerne St. (24)
1960. Lovett, B. Frank, North Park Drive & Airport Highway, Pennsauken, N.J. (08109)
1963. Lubowitz, Richard M., Benson East Apts., Jenkintown, Pa.
1936. Lucchesi, Pascal Francis, 601 E. Gorgas Lane (19)
1967. Luce, Cyril M., 102 W. Front St., Media, Pa. (19063)
1970. Lucente, Edward R., 1907 S. Broad St. (19148)
1939. Luongo, Romeo A., 2054 Locust St. (3)
1951. Luscome, Herbert A., 136 S. 16th St. (2)
1952. Lutman, Frank C., 33 E. Chestnut Hill Ave. (19118)
1919. Lynch, Frank B., Jr., 809 Cambridge Apts., School House Lane (44)
1950. Lynch, J. Edward, Mercy Catholic Medical Center, Medical Sciences Bldg., Darby, Pa. (19023)
1953. Lyons, John W., 255 S. 17th St. (3)
1965. McCabe, James L., Jr., Bryn Mawr Med. Bldg., Bryn Mawr, Pa. (19010)
1932. *McCahey, James F., Wesley Manor, Jacksonville, Fla. (32223)
1958. *McClenahan, John L., 39 East Chestnut Hill Ave. (18)
1935. McClenahan, William U., 33 East Chestnut Hill Ave., Chestnut Hill (18)
1957. McConnell, Edward L., Jr., 2342 S. Broad St. (45)
1934. McCouch, Grayson P., R.D. #4, W. Chester, Pa. (19380)
1962. McCracken, Stewart, 3701 N. Broad St. (40)
1938. McCrea, Lowrain E., 1930 Chestnut St. (3)
1958. McCune, Wallace G., 5555 Wissahickon Ave. (44)
1942. McDonald, P. Robb, Lankenau Medical Bldg. (19151)
1953. McDonnell, William V., West Jersey Hospital, Camden 4, N.J.
1952. McElroy, Robert C., 133 S. 36th St. (4)
1970. McFadden, John F., 102 Wooden Bridge, Holland, Pa. (18966)
1950. McFadden, William M., 1187 E. Washington Lane (19138)
1949. McGavic, John S., 1104 Montgomery Ave., Rosemont, Pa. (19010)
1970. McGeary, Joseph D., Fidelity Mutual Life Ins. Co., Parkway at Fairmount (19130)
1945. McGee, Lemuel Clyde, Box 3879, Greenville, Wilmington, Del. (19807)
1954. McGehee, Edward H., 33 E. Chestnut Hill Ave. (18)
1952. McGlade, Thomas H., 514 Cooper St., Camden, N.J. (08102)
1966. McGrath, Raymond J., 1720 Spruce St. (3)
1933. McLaughlin, James S., 330 S. 9th St. (19107)

* S. Weir Mitchell Associate

1966. McMichael, Harrison, 524 Meadowbrook Circle, Wayne, Pa. (19087)
1924. McMillan, Thomas M., 2451 Mt. Island Drive, North, Mobile, Ala. (36606)
1955. McStravog, Lawrence J., 5057 Sylvia Rd., Drexel Hill, Pa. (19026)
1954. MacFayden, Bruce V., 1801 J. F. Kennedy Blvd. (19103)
1964. Macht, Elmer L., Jr., York & Keith Roads, Abington, Pa.
1949. MacNeal, Perry Scott, Suite 308, Franklin Medical Bldg., 829 Spruce St. (19107)
1951. MacNeish, W. J., 821 Great Springs Rd., Rosemont, Pa. (19010)
1955. Macy, Dorothy, 5616 N. 45 St., Phoenix, Ariz. (85018)
1957. Madow, Leo, Woman's Medical College, 3300 Henry Ave. (19129)
1970. Magee, John T., Bryn Mawr Hosp., Bryn Mawr, Pa. (19010)
1967. Magee, Joseph H., 330 N. Princeton Ave., Swarthmore, Pa. (19081)
1966. Maguire, Henry C., Jr., Hahnemann Medical College & Hosp. (19102)
1952. Mahoney, J. Francis, 250 S. 18th St. (3)
1969. Mahood, William H., 1245 Highland Ave., Abington, Pa. (19001)
1970. Maier, Willis P., 3401 N. Broad St. (19140)
1969. Mallin, Aaron W., Rittenhouse Med. Center, 1900 Spruce St. (19103)
1965. Mancall, Elliott L., 230 N. Broad St. (19102)
1959. Mandel, Martin M., Benson Manor, Township Line & Washington Lane, Jenkintown, Pa.
1968. Mandell, Morton S., 1319 W. Tabor Rd. (19141)
1966. Manges, W. Bosley, 255 S. 17th St. (19103)
1954. Manges, Willis E., Methodist Hospital, Broad & Wolf Sts. (48)
1970. Manley, Donelson R., Wills Eye Hospital (19130)
1949. Manlove, Francis R., 500 Williamson Rd., Gladwyne, Pa.
1960. Manning, Valentine R., 3336 Aldine St. (36)
1956. Manstein, George, 1351 Tabor Rd. (41)
1969. Mansure, Frank T., 4601 Market St. (19139)
1969. Mansure, Patricia R., The Parkway at Fairmont Ave. (19101)
1953. Marbach, A. Herbert, 1307 Tabor Rd. (41)
1948. *Marden, Philip Ayer, University Hospital, 36th & Spruce Sts. (4)
1958. Marino, Daniel J., 422 East 22nd St., Chester, Pa.
1966. Markind, Simon, Albert Einstein Med. Center, York & Tabor Rds. (19141)
1969. Marks, Gerald, 255 S. 17th St. (19103)
1950. Marshall, E. Wayne, 907 Pine St. (19107)
1968. Martin, John H., 3401 N. Broad St. (19140)
1951. *Martin, William L., 402 Holly Lane, Wynnewood, Pa. (19096)
1953. Marx, Halvey E., 76 Brennan Drive, Bryn Mawr, Pa.
1970. Mason, Daniel, 1500 Vine St. (19102)
1966. Mastroianni, Luigi, Jr., University Hospital (19104)
1968. Mausner, Judith S., Woman's Medical College (19129)
1951. Mayock, Robert L., 3600 Spruce St. (4)
1958. Mays, Ralph Whiteman, 154 W. Tulpehocken St. (44)
1961. Mechanick, Philip, Univ. of Pa. Hosp. (19104)
1952. Mecray, Paul, Jr., Suite 303, Cooper Parkway W., N. Park Drive & Airport Highway, Pennsauken, N.J. (08109)
1951. Medinger, Frederick G., 1941 Woodland Road, Abington, Pa.
1959. Medoff, Joseph, 5400 Wynnefield Ave. (31)
1941. Mendell, Theodore H., 2023 Spruce St. (3)
1943. Meranze, David R., 229 W. Upsal St. (19119)
1954. Mertens-Roesler, Elizabeth, 2910 Woodpipe Lane (29)
1955. Mervine, Thomas B., Medical Arts Bldg., Woodbury, N.J. (08096)
1959. Metzger, Harry N., 1815 Pine St. (3)
1964. Meyer, Edward C., Fitzgerald Mercy Hospital, Darby, Pa. (19023)
1964. Michaile, Kenneth I., 1930 Chestnut St. (19103)
1971. Michon, Catherine A., 702 N. White Horse Pike & Wright Ave., Stratford, N.J. (08084)
1956. Miller, Bernard Joseph, Medical Office Bldg., 666 E. Penn St. (19144)

* S. Weir Mitchell Associate

1939. Miller, Malcolm W., Lankenau Medical Bldg. (19151)
1939. *Miller, Merle M., 6013 Greene St. (44)
1921. *Miller, T. Grier, 133 S. 36th St. (4)
1955. Miller, William H., Fitzgerald Mercy Hospital, Darby, Pa.
1952. Minehart, John R., 615 E. Allegheny Ave. (19134)
1952. *Mintz, S. S., 1930 Chestnut St. (3)
1963. Mishkin, Mark M., Univ. of Pa. Hospital (19104)
1952. Mitchell, Robert McNair, 807 Spruce St. (7)
1959. *Mitterling, Robert C., Chestnut St. & Glendale Rd., Upper Darby, Pa.
1967. Monheit, Richard S., Albert Einstein Medical Center, N.D. (19141)
1970. Montgomery, Bruce B., 1930 Chestnut St. (19103)
1936. Montgomery, Hugh, 932 Merion Sq. Rd., Gladwyne, Pa. (19035)
1936. *Montgomery, John B., 1930 Chestnut St. (3)
1932. Montgomery, Thaddeus L., 2031 Locust St. (3)
1935. *Moore, John Royal, 3701 N. Broad St. (19140)
1947. Moore, Matthew Thibaud, 1813 Delancey Pl. (3)
1958. Moore, Samuel R., Jr., 1600 Arch St. (1)
1958. Morani, Alma D., 3665 Midvale Ave. (29)
1936. Morgan, David R., % Chas. W. Van Horn, R.D. #2, Dalton, Pa. (18414)
1945. Morris, I. Paul, 1939 Cheltenham Ave. (17)
1969. Morris, Robert G., Jr., 5000 Woodland Ave. (19143)
1967. Moss, N. Henry, N. Medical Bldg., 1335–49 W. Tabor Rd. (19141)
1964. Most, William, 994 Haddon Ave., Collingswood, N.J. (08108)
1971. Moulder, Peter V., 803 Spruce St. (19107)
1959. Moyer, John H., 230 N. Broad St. (2)
1941. *Mucklé, Craig Wright, 8016 Seminole Ave. (19118)
1929. Mudd, Stuart, V.A. Hosp. (19104)
1960. Mulberger, Roebrt D., 1930 Chestnut St. (3)
1965. Muller, Otto, Fitzgerald-Mercy Hospital, Darby, Pa.
1968. Murphey, Henry S., Henry R. Landis Hosp. Girard and Corinthiam Aves. (19130)
1930. Murphy, Douglas P., 601 S. Bowman Ave., Merion Station, Pa.
1953. Murphy, Edward J., Byrn Mawr Medical Bldg., Bryn Mawr, Pa.
1958. Murphy, John J., 3600 Spruce St. (4)
1959. Murray, Edwin N., 130 N. Broadway, Camden, N.J.
1955. Murtagh, Frederick, Jr., 3401 N. Broad St. (40)
1951. Myers, David, 3701 N. Broad St. (40)
1969. Myers, Eugene N., 3701 N. Broad St. (19140)
1965. Myers, Richard N., 307 Lankenau Medical Bldg. (19151)
1955. Nachod, Grace R., 5501 Greene St. (44)
1968. Naden, Randall S., Jr., 130 N. Broadway, Camden, N.J. (08102)
1968. Nagel, Frank O., Jr., 37 S. 20th St. (19103)
1945. Naide, Meyer, 2034 Spruce St. (3)
1951. Naidoff, David, 3500 Tudor St. (36)
1966. Nance, Maurice R., 1500 Spring Garden St. (19101)
1950. Nardone, Anthony A., 912 South 49th St. (43)
1959. Neal, Hunter S., 460 Lankenau Medical Bldg. (19151)
1963. Nelson, Arthur D., 3400 N. Broad St. (40)
1943. Nelson, Waldo E., 615 Moreno Rd., Narbeth, Pa.
1955. *Nemir, Paul, Jr., 19th & Lombard Sts. (19146)
1971. Nevyas, Herbert J., 1930 Chestnut St. (19103)
1970. Nicastro, Gennaro C., 3018 N. 25th St. (19132)
1970. Nicholas, Leslie, 255 S. 17th St. (19104)
1970. Nichols, Henry T., 230 N. Broad St. (19102)
1935. *Nicholson, Jesse Thompson, 419 S. 19th St. (19146)
1960. Nicholson, John W., III, 115 Chestnut St., Moorestown, N.J.
1947. Noone, Ernest L., R.D. #1, Elverson, Chester Co., Pa. (19520)

* S. Weir Mitchell Associate

1954. Norris, Charles M., 3401 N. Broad St. (40)
1938. *Norris, Robert F., 430 Colebrook Lane, Bryn Mawr, Pa. (19010)
1957. Oakey, Richard S., Jr., 419 E. 22 St., Chester, Pa. (19013)
1963. O'Hara, A. Edward, Jefferson Medical College Hospital (19107)
1954. Olsen, Axel K., The Windsor Apts. (19103)
1949. O'Neill, James F., 1425 Woodland Rd., Rydal, Pa. (19046)
1947. Ornsteen, A. M., 2007 Delancey Pl. (3)
1958. O'Sullivan, Ward D., Mercy Cath. Med. Center, Fitzgerald Mercy Hosp., Darby, Pa. (19023)
1955. Ottenberg, Donald J., Eagleville Hosp., Eagleville, Pa. (19408)
1970. Ottenberg, Perry, 111 N. 49th St. (19139)
1968. Ovedoff, David L., 1500 Spring Garden St. (19101)
1961. Owen, Barbara J., Bryn Mawr Hospital, Bryn Mawr, Pa. (19010)
1949. *Padis, Nicholas, Lankenau Medical Bldg. (51)
1968. Padula, Richard T., 1025 Walnut St. (19107)
1968. Pareira, Morton D., Albert Einstein Med. Center (N), York & Tabor Rds. (19141)
1963. Parish, Benjamin D., Jr., 1261 Bethlehem Pike, Flourtown, Pa. (19031)
1945. Park, Felix Roman, 1980 Utica Sq., Tulsa, Okla. (74114)
1948. Parkhurst, Leonard Woods, 330 S. 9th St. (7)
1952. Paxson, Newlin F., 245 N. Broad St. (7)
1932. Payne, Franklin L., 240 Beech Hill Road, Wynnewood, Pa. (19096)
1954. Pearce, Alexander E., 1420 Race St. (2)
1958. Pearce, Rowan C., Jr., 30 Washington Ave., E-Entry, Haddonfield, N.J. (08033)
1965. Pearlstine, Beatrice, 7404 Mountain Ave. (19126)
1954. Pearson, Manuel M., 111 N. 49th St. (39)
1967. Pechin, Sergius P., 1910 Garrett Rd., Lansdowne, Pa. (19050)
1960. Peltz, William L., 111 North 49th St. (39)
1930. *Pendergrass, Eugene P., Radiology Dept., University Hospital, 3400 Spruce St. (19104)
1953. Penneys, Raymond, University of Pennsylvania Hospital (4)
1964. Perrin, George M., First Floor Mills Bldg., Philadelphia General Hospital, 34th & Curie Ave. (19104)
1940. Pessel, Johannes F., 224 West State St., Trenton, N.J. (08608)
1952. Peters, Michael, Fairhill Rd., Hatfield, Pa. (19440)
1968. Peterson, Arthur L., 111 N. 49th St. (19139)
1961. Peterson, Lysle H., Bockus Research Institute, 19th & Lombard Sts. (19146)
1940. Pettit, Horace, 601 Suburban Sq. Bldg., Ardmore, Pa. (19003)
1949. *Pettit, Mary DeWitt, 3300 Henry Ave. (19129)
1946. Pfeifer, Mildred C. J., 358 Valley Rd., Merion, Pa. (19066)
1935. Phillips, Arthur W., Emlenton, Pa. (16373)
1961. Phillips, William A., Eastern Pennsylvania Psychiatric Institute (19129)
1948. Pierson, Daniel B., Jr., 740 Beacon Lane, Merion, Pa. (19066)
1964. Pierucci, Louis, Jr., Suite 303 Cooper Parkway West, N. Park Drive, Pennsauken, N.J. (08109)
1961. Pike, Anne H., Suite L-11 Stafford House, 5555 Wissahickon Ave. (19144)
1957. *Pilling, George Platt, IV, 2600 N. Lawrence St. (19133)
1933. *Pillsbury, Donald M., Duhring Labs., University Hospital (19104)
1957. Platt, Ruth M., 441 Lyceum Ave. (28)
1951. Poinsard, Paul J., 2123 Delancey Place (19103)
1968. Polin, Edward B., 7810 Old York Rd. (19117)
1937. Polk, David Stewart, Rosemont, Pa.
1967. Polk, Lewis D., 500 S. Broad St. (19146)
1956. *Pontarelli, Domenic J., 1037 Great Springs Rd., Rosemont, Pa.
1953. Porreca, George A., 1843 S. Broad St. (19148)
1932. Porter, Roland De Lance, Abington Medical Bldg., Abington, Pa.
1951. Pote, Harry H., 103 E. Ridley Ave., Ridley Park, Pa.
1958. Potter, H. Phelps, Jr., Paoli Memorial Hosp., Lincoln Hwy., Paoli, Pa. (19301)

* S. Weir Mitchell Associate

1951. *Pressman, Robert S., 170 W. Olney Ave. (19120)
1965. Price, Joseph J., 36 Copley Road, Upper Darby, Pa.
1947. Prickett, John A., Warrington, Bucks County, Pa.
1931. Pryor, Charles Allen, 734 S. Latch's Lane, Merion Station, Pa. (19066)
1952. Pugh, James E., 614 Church Lane, Yeadon, Pa.
1968. Qualls, Donald M., Lankenau Medical Bldg. (19151)
1943. *Radbill, Samuel X., 7043 Elmwood Ave. (42)
1953. Radbill, Sidney G., Wm. Penn House, 1919 Chestnut St. (19103)
1966. Raffensperger, Bruce W., 8811 Germantown Ave. (19118)
1953. Raffensperger, Edward C., 260 St. James Place (6)
1945. Rakoff, Abraham Edward, Franklin Medical Bldg., 829 Spruce St. (19107)
1953. Ralston, Edgar L., 3400 Spruce St. (4)
1931. Ramsey, Frank M., Lakeside Dr., Rt. 1, Mayfield, N.Y. (12117)
1868. Randall, Peter, Univ. of Pa. Hosp. (19104)
1953. Ranieri, Tito A., 2320 S. Broad St. (45)
1941. Rankin, Charles A., Ludlow & Heather Rd., Upper Darby, Pa.
1968. Rashkind, William L., Children's Hosp. (19146)
1951. *Rathmell, Thomas K., 446 Bellevue Ave., Trenton, N.J.
1926. *Ravdin, I. S., Univ. of Pa. Hospital (4)
1956. Ravdin, Robert Glenn, 3400 Spruce St. (4)
1959. Raventos, Antonlin, Univ. of Calif. Med. Sch., Davis, Calif. (95616)
1969. Rawnsley, Howard M., 3400 Spruce St. (19104)
1962. Raymond, F. Douglas, Jr., Bryn Mawr Medical Bldg., Bryn Mawr, Pa.
1964. Raymond, Samuel, 711 Maloney Bldg., University Hospital, 36th & Spruce Sts. (19104)
1961. Read, William T., Jr., 110 Munn Lane, Cherry Hill, N.J. (08034)
1954. *Reagan, Lindley B., 601 Chester Ave., Moorestown, N.J. (08057)
1965. Reddy, John B., 1620 Montgomery Ave., Villanova, Pa. (19085)
1960. Reed, Theodore P., Lankenau Medical Bldg. (19151)
1928. Reese, Warren S., 2118 Locust St. (3)
1964. Reinhard, John J., Jr., 335 Woodstown Road, Salem, N.J.
1956. Reishtein, William A., 16 Bancoyd Rd., Merion Station, Pa.
1963. Reisinger, Paul B., 855 Berkeley Ave., Trenton, N.J.
1970. Reivich, Martin, Dept. Neurology, HUP, 3400 Spruce St. (19104)
1969. Relman, Arnold S., 3600 Spruce St. (19104)
1951. Rentschler, Laurence B., 5800 Ridge Ave. (28)
1968. Rex, Eugene B., Lankenau Medical Bldg. (19151)
1945. *Rhoads, Jonathan E., Univ. of Pa. Hospital (4)
1946. Rhoads, Rebecca M. P., Alden Park, Kenilworth 303 (19144)
1963. Rial, William Y., 111 Dartmouth Ave., Swarthmore, Pa.
1971. Richman, Morton W., 245 N. Broad St. (19102)
1936. Ritter, Joseph A., 1034 Bryn Mawr Ave., Narbeth, Pa.
1952. Robbins, Robert, 3401 N. Broad St. (40)
1954. *Roberts, Brooke, 3400 Spruce St. (4)
1957. Roberts, Joan Mary, 4 W. Mt. Pleasant Ave. (19)
1968. Roberts, John M., 5555 Wissahickon Ave. (19144)
1964. Robinson, James H., 5900 Spruce St. (19139)
1969. Robinson, Nathaniel M., 5229 Spruce St. (19139)
1969. Rodgers, Robert A., Jr., Westwood Med. Center, King's Hwy. & Westwood Dr., Woodbury, N.J. (08096)
1960. Roeder, Paul H., Haverford Ave. & Westwood Lane, Overbrook Hills, Pa. (19051)
1969. Roediger, Paul M., 1245 Highland Ave., Abington, Pa. (19001)
1955. *Rogers, Fred B., 3401 N. Broad St. (40)
1971. Rominger, C. Jules, Radiology Dept., 5301 Cedar Ave. (19143)
1851. *Ronis, Bernard J., 2106 Spruce St. (3)
1971. Rorke, Lucy B., 120 Chestnut St., Moorestown, N.J. (08057)
1969. Rosato, Francis E., 3400 Spruce St. (19104)

* S. Weir Mitchell Associate

1948. Roscoe, Constantine R., 7226 Castor Ave. (24)
1928. Rose, Edward, 426 Owen Rd., Wynnewood, Pa.
1936. Rose, Elizabeth Kirk, 426 Owen Rd., Wynnewood, Pa.
1959. Rose, Isadore, 6000 W. Oxford St. (19151)
1965. Rosenberg, Hyman, 1555 Haddon Ave., Camden, N.J.
1946. *Rosemond, George Parrott, 3401 N. Broad St. (40)
1960. Rosenow, Edward C., Jr., American College of Physicians, 4200 Pine St. (4)
1948. Rothman, Maurice M., Kennedy House, Apt. 2504, 19th & J. F. Kennedy Blvd. (19103)
1951. Rouse, George P., Jr., 2031 Locust St. (19103)
1966. Rovner, Harold, 1427 Spruce St. (19102)
1969. Rowland, Lewis P., G50 Administration Bldg., 3400 Spruce St. (19104)
1952. Roxby, Bruce S., Temple Univ. Health Services, Broad and Montgomery (19122)
1955. Roxby, John B., Jr., 215 Vassar Ave., Swarthmore, Pa. (19081)
1949. Royster, Henry P., 888 Glenbrook Ave., Bryn Mawr, Pa. (19010)
1959. Rubin, Alan, 1905 Spruce St. (19103)
1952. Rubin, I. Edward, 255 S. 17th St. (3)
1966. Rugart, Karl F., 811 Spruce St. (19107)
1947. Rush, Alexander, 330 S. 9th St. (7)
1963. Rutter, William A., 425 Wister Rd., Wynnewood, Pa.
1963. Ryan, James J., Suite 2, 7516 City Line Ave. (19151)
1945. Rynes, Samuel E., 334 S. 21st St. (3)
1965. Sachs, Marvin L., 133 S. 36th St. (19104)
1952. Sain, Fletcher D., 1245 Highland Ave., Abington, Pa. (19001)
1970. Salim, Bozorgmehr, Lankenau Hosp. (19151)
1952. Salner, Nathan P., 6812 Castor Ave. (24)
1952. Saltzman, Maurice, 2037 Spruce St. (3)
1966. Samitz, M. H., 1715 Pine St. (19103)
1944. Sampson, David Alan, 726 Braeburn Lane, Penn Valley, Narbeth, Pa.
1964. Santangelo, Samuel C., 1941 Woodland Road, Abington, Pa.
1968. Sarin, Lov K., Lankenau Med. Bldg. (19151)
1950. Sarner, Joseph B., 289 Locust St. (19106)
1967. Sattilaro, Anthony J., Methodist Hospital (19148)
1954. Savacool, J. Woodrow, 146 W. Tulpehocken St. (44)
1947. Sayen, John J., 3600 Spruce St. (4)
1969. Schraedler, Russell W., Jefferson Med. College (19107)
1971. Schamberg, Ira L., 7852 Montgomery Ave. (19117)
1942. *Scheie, Harold G., 3400 Spruce St. (19104)
1929. Schenck, Harry P., 1235 Wyngate Rd., Wynnewood, Pa. (19096)
1966. Schless, Guy L., 330 South Ninth St. (19107)
1945. Schlezinger, Nathan S., 255 S. 17th St. (3)
1961. Schlosser, Woodrow D., 3701 N. Broad St. (40)
1971. Schmidt, William C., 223 Lancaster Ave., Devon, Pa.
1917. Schnabel, Truman G., 509 William Road, Wynnewood, Pa. (19096)
1958. Schnabel, Truman G., Jr., Phila. General Hospital (19104)
1957. Schnall, Nathan, 2037 Pine St. (3)
1962. Schneider, Henry C., 4801 Penn St. (24)
1966. Schoenberg, Harry W., 3400 Spruce St. (19104)
1970. Schott, Clifford E., Jr., Misericordia Hosp. (19143)
1968. Schotz, Seymour, 51 N. 39th St. (19104)
1955. Schreader, Charles J., 8906 Atlantic Ave., Margate City, N.J. (08402)
1952. Schulz, Norbert J., 1901 Walnut St. (3)
1950. Schumann, Francis, 8811 Germantown Ave. (18)
1948. Schwarz, Gabriel A., 133 S. 36th St. (4)
1962. Schwarz, Henry P., Philadelphia General Hospital (4)
1955. Schwegman, Cletus W., Hospital of the University of Penna. (4)
1966. Scott, J. Clifford, 826 Maple Ave., Berwyn, Pa.

* S. Weir Mitchell Associate

1930. Scott, John Porter, Children's Hospital, 1740 Bainbridge St. (46)
1950. Scott, Michael, 3401 N. Broad St. (40)
1940. Scott, T. F. McNair, Children's Hospital, 1740 Bainbridge St. (46)
1952. Seifer, Arthur F., 710 South Main St., Phoenixville, Pa.
1958. Sellers, Alfred M., Hosp. of the Univ. of Pa. (4)
1952. Semisch, Charles W., III, 1344 Gilbert Rd., Meadowbrook, Pa.
1968. Senior, John R., 54 Marbrook Lane, Merion Station, Pa. (19066)
1969. Sewell, Edward M., Children's Hosp. (19146)
1967. Seyler, Raymond Q., 1600 Arch St. (19101)
1966. Shaffer, Horace M., 208 W. State St., Trenton, N.J. (08608)
1960. *Shannon, Gerard M., 8118 Bustleton Ave. (15)
1963. Sharples, Wynne, 454 S. Ithan Ave., Villanova, Pa. (19085)
1928. Sharpless, Frederick C., 621 Railroad Ave., Haverford, Pa.
1956. Shaw, Daniel L., Jr., 702 Knox Rd., Villanova, Pa.
1963. *Shearburn, Edwin W., 306 Lankenau Medical Bldg. (19151)
1955. Schechter, Fred R., 2461 No. 54th St. (31)
1954. Shelley, Walter B., 36th & Spruce Sts. (4)
1955. Shenkin, Henry A., Episcopal Hospital, (25)
1946. Shepherd, Samuel Garfield, Town House Apt. 5E, 301 S. 19th St. (19103)
1968. Sherk, Henry H., 330 S. Ninth St. (19107)
1968. Sherry, Sol, Temple Univ. Health Center (19140)
1956. Sherson, Jacob S., 405 Meadow Lane, Merion Station, Pa. (19066)
1958. Shipps, Hammell P., 21 E. Euclid Ave., Haddonfield, N.J. (08033)
1957. Shope, Edward Pierce Lentz, 807 Wilson Bldg., Camden, N.J.
1946. Shoup, George Daniel, 121 W. Walnut Lane (44)
1955. *Shubin, Harry, 1829 Pine St. (19103)
1952. Shuman, Charles R., 3401 N. Broad St. (40)
1949. Sidlick, David M., Park Towne Place E., 2200 Benj. Franklin Pkwy. (19130)
1969. Silberberg, Donald H., Univ. of Pa. Hosp. (10104)
1941. *Silcox, Louis E., Lankenau Medical Bldg. (19151)
1956. *Sillars, Charles H., Abington Memorial Hospital, Abington, Pa.
1968. Silverio, John, Wyeth Labs., P. O. Box 8299 (19101)
1963. Silverman, Daniel, 408 Waring Rd. (19117)
1955. Silverstein, Alexander, 1829 Pine St. (19103)
1967. Simenhoff, Michael L., 1205 Walnut St. (19107)
1961. Simmons, Vaughan P., The Fidelity Mutual Life Insurance Co. (1)
1954. Singmaster, Lawrence, 272 Cheswold Lane, Haverford, Pa.
1952. Skromak, Stanley J., 5108 Torresdale Ave. (24)
1969. Skversky, Norman J., 6810 Castor Ave. (19149)
1968. Slate, William G., Albert Einstein Med. Center (N), York and Tabor Rds. (19141)
1967. Sloane, Norman G., 255 S. 17th St. (19103)
1929. Smith, Austin T., 330 S. 9th St. (7)
1964. Smith, Edgar C., 7100 Marshall Road, Upper Darby, Pa.
1967. Smith, Kaighn, Lankenau Medical Bldg. (19151)
1933. Smith, Lauren Howe, 111 N. 49th St. (39)
1952. Smith, Richard T., 330 S. 49th St. (7)
1967. Smith, Robert R., William H. Rorer, Inc., 500 Virginia Drive, Fort Washington, Pa. (19034)
1964. Smyth, Murray G., Jr., 1710 Delancey Place (19103)
1968. Snagg, William T., Cooper Hospital, Camden, N.J. (08103)
1951. Snape, William J., Cooper Hosp., Medical Arts Bldg., 5th Floor, 300 Stevens St., Camden, N.J. (08103)
1966. Snow, Laurence H., 3300 Henry Ave. (19129)
1958. Sodeman, William A., Suite 620, 116 S. 7th St. (19106)
1961. Soffe, Alvin M., 1930 Chestnut St. (3)
1935. Sokoloff, Martin J., 255 S. 17th St. (3)

* S. Weir Mitchell Associate

1971. Solit, Robert W., 829 Spruce St. (19107)
1964. Soll, David B., 5001 Frankford Ave. (19124)
1940. Soloff, Louis A., 3401 N. Broad St. (40)
1944. Sommer, George N. J., Jr., 120 W. State St., Trenton, N.J.
1952. Sones, Maurice, Mt. Airy Medical Bldg. (19)
1951. Sonneborn, Duane G., 1200 W. Erie Ave. (24)
1928. *Spaeth, Edmund B., 1930 Chestnut St. (3)
1966. Spaeth, George L., 1601 Spring Garden St. (19130)
1958. Spaeth, Philip G., 1930 Chestnut St. (3)
1937. Spangler, John Luther, 429 Montgomery Ave., Haverford, Pa. (19041)
1957. Spelman, Joseph Worcester, Dept. of Public Health, 13th & Wood Sts. (7)
1935. Spiegel, Ernest A., 6807 Lawnton Ave. (26)
1961. *Spiegelman, Jay, Benson East Apt., Jenkintown, Pa.
1955. Spitz, Eugene B., 40–50 W. Front St., Media, Pa.
1958. Splendido, Joseph A., 608 W. Cliveden (19)
1961. Stahlgren, LeRoy H., Episcopal Hospital, Front & Lehigh Ave. (19125)
1960. Stainback, William C., Bryn Mawr Medical Bldg., Bryn Mawr, Pa.
1957. Stanley, Robert C. G., 2315 Edgemont Rd., Chester, Pa.
1968. Stapinski, Stanley M., 80 W. Main St., Glen Lyon, Pa. (18617)
1927. Starr, Isaac, 505 Chesheim Valley Rd. (18)
1952. Stayman, Joseph W., Jr., 8815 Germantown Ave. (18)
1945. Stecher, H. Armin, 1510 Darby Rd., Havertown, Pa.
1955. Steel, Howard H., 1526 Mt. Pleasant Rd., Villanova, Pa. (19085)
1964. Stein, Donald B., Jr., 3000 Robin Lane, Havertown, Pa. (19083)
1946. Stein, Irvin, 1936 Spruce St. (3)
1966. Stein, Joseph M., Box 19, 709 Market St., Camden, N.J. (08101)
1953. Stein, Raymond O., 269 S. 19th St. (3)
1966. Stein, Samuel C., 1930 Chestnut St. (19103)
1936. Steinfield, Edward, 2200 Benjamin Franklin Parkway (30)
1968. Steinmetz, Charles G., III, 4606 Spruce St. (19139)
1951. Sterling, Julian A., 3505 S. Ocean Drive, Hollywood, Fla. (33020)
1948. Stevens, Lloyd W., Presbyterian-Univ. of Pa. Med. Center Bldg. 301, 3910 Powelton Ave. (19104)
1969. Stewart, W. Wayne, 1608 Walnut St. (19103)
1928. *Stokes, Joseph, Jr., Henry Phipps Institute, 4219 Chester Ave. (19104)
1943. Stokes, S. Emlen, 129 Chester Ave., Moorestown, N.J.
1967. Stool, Sylvan E., 1740 Bainbridge St. (19146)
1968. Storey, Patrick B., 1505 Race St. (19102)
1961. Strang, John E., Byrn Mawr Med. Bldg., Bryn Mawr, Pa. (19010)
1953. Strawbridge, Rendall R., Lankenau Medical Bldg. (19151)
1937. *Strumia, Max M., Penn Valley, Narbeth, Pa.
1960. *Strumia, Paul V., Bryn Mawr Hospital, Bryn Mawr, Pa.
1971. Stumpe, Alfred R., 3930 Chestnut St. (19104)
1967. Stunkard, Albert J., Univ. of Pennsylvania (19104)
1951. *Sturgis, Katharine Boucot, 349 Wister Rd., Wynnewood, Pa. (19096)
1927. Sturgis, Samuel Booth, 349 Wister Rd., Wynnewood, Pa. (19096)
1971. Sugiura, Henry T., 51 N. 39th St. (19104)
1966. Sullivan, Howard E., Jr., Bryn Mawr Medical Bldg., Bryn Mawr, Pa. (19010)
1930. Sunderman, F. William, 1833 Delancy Place (3)
1954. *Sussman, Marcel S., Wm. Penn House, 1919 Chestnut St. (19103)
1963. Sutliff, Frederick P., Rm. 202–3, Bryn Mawr Med. Bldg., Bryn Mawr, Pa. (19010)
1965. Sutnick, Alton I., 2135 St. James Place (19103)
1965. Swartley, Robert N., 50 Bethlehem Pike (19118)
1968. Sweeney, Francis J., Jr., Jefferson Med. College (19107)
1952. Talbot, Timothy R., Jr., 204 Booth Lane, Haverford, Pa.
1963. Tassman, William S., 187 E. Evergreen Ave. (19118)

* S. Weir Mitchell Associate

1946. Tauber, Robert, 1600 Providence Blvd., Daltona, Florida (32763)
1952. Taylor, Ann Gray, 6364 Germantown Ave. (44)
1960. Taylor, Daniel B., 2241 Federal St. (46)
1965. Taylor, Richard C., Reddington Fairview Hosp., Skowhegan, Maine (04976)
1969. Taylor, W. J. Russell, PGH, 34th and Curie Ave. (19104)
1956. Templeton, John Y., III, 829 Spruce St. (19107)
1966. Teplick, Joseph G., 419 N. Sterling Rd. (19117)
1966. Terry, Luther L., 121 College Hall, Univ. of Pennsylvania (19104)
1951. Theodos, Peter A., 1930 Chestnut St. (3)
1961. Therman, Per-Olof, 111 N. 49th St. (39)
1970. Thier, Samuel O., Rm. 570 Maloney Bldg., HUP, 3400 Spruce St. (19104)
1959. Thomas, Arthur H., 5240 Vine St. (39)
1946. Thomas, Carmen C., 1930 Chestnut St. (3)
1964. Thomas, John W., 5900 Spruce St. (19139)
1970. Thompkins, Leonard J., Miscericordia Hosp. (19143)
1952. Thompson, Charles M., 428 Penn Valley Rd., Narberth, Pa. (19702)
1971. Thompson, Hartwell G., HUP, 3400 Spruce St. (19104)
1927. Thorington, J. Monroe, Cambridge Apts., Wissahickon Ave. & School House Lane (44)
1967. Thorwarth, William T., 8835 Germantown Ave. (19118)
1971. Tillman, Joseph M., Jr., 434 Lindley Avenue (19120)
1954. Tindall, Dorothy D., 1930 Rittenhouse Sq. (3)
1966. Toland, Joseph J., N.E. Med. Center, Roosevelt Blvd. & Welsh Rd. (19114)
1935. Toland, Owen J., 336 Aubrey Rd., Wynnewood, Pa.
1952. *Tondreau, Roderick L., 523 Old Gulph Rd., Bryn Mawr, Pa.
1949. Tornay, Anthony S., 2038 Locust St. (3)
1966. Torrance, Edward G., 678 Burmont Rd., Drexel Hill, Pa.
1968. Tourtellotte, Charles D., 3400 N. Broad St. (19140)
1936. Towson, Charles Emory, 224 W. Washington Lane (44)
1955. Trimpi, Howard D., 501 N. 17th St., Allentown, Pa.
1954. Trommer, Philip R., 258 S. 18th St. (3)
1956. Troncelliti, Mario V., Pennsylvania Hospital (7)
1953. Tropea, Frank, Jr., 500 Mulberry Lane, Haverford, Pa.
1947. Trueman, Robert H., 2101 Chestnut St. (3)
1954. Truitt, R. Marshall, Jr., 6400 Wissahickon Ave. (19119)
1971. Tucker, John A., HUP, 3400 Spruce St. (19104)
1966. Tucker, Gabriel F., Jr., 3401 N. Broad St. (19140)
1959. Tuddenham, William J., Pennsylvania Hospital (7)
1938. Tuft, Louis, 1530 Locust St. (2)
1964. Tulsky, Emanuel G., Abington Memorial Hospital, Abington, Pa. (19001)
1933. *Tumen, Henry J., 1830 Rittenhouse Square (3)
1938. Turman, Christopher M., 1245 Highland Ave., Abington, Pa. (19001)
1959. Tyson, R. Robert, 3401 N. Broad St. (40)
1937. *Uhle, Charles A. W., E. Valley Green Rd., Whitemarsh, Fort Washington P.O., Montgomery Cty., Pa. (19034)
1953. Ulin, Alexander W., 230 N. Broad St. (2)
1970. Urbach, Frederick, 3322 N. Broad St. (19140)
1960. Urcchio, Joseph F., 245 N. Broad St. (7)
1950. Valdes-Dapena, Antonio, 214 Plush Mill Rd., Wallingford, Pa.
1958. Van den Noort, Gordon, 1245 Highland Ave., Abington, Pa. (19001)
1937. *Vander Veer, Joseph B., 106 Bryn Mawr Med. Bldg., Bryn Mawr, Pa. (19010)
1937. Van Loon, Emily Lois, 4705 Disston St. (19135)
1960. Van Meter, Ralph H., 244 W. Main St., Moorestown, N.J.
1933. *Vastine, Jacob H., 2nd, 267 Kent Rd., Wynnewood, Pa.
1967. Vaughan, Victor C., III, 2600 N. Lawrence St. (19133)
1963. Vaughan, Arthur R., Jr., 5329 Rising Sun Ave. (19120)
1958. Velkoff, Cyril L., 2100 Walnut St. (3)

* S. Weir Mitchell Associate

1965. Viggiano, Louis X., 528 Brandymede Place, Rosemont, Pa. (19010)
1952. Vischer, Thomas J., 5903 Green St. (44)
1940. Voegelin, Adrian W., Suite 108, 5735 Ridge Ave. (19128)
1960. Wagenheim, Harry H., 1822 Spruce St. (3)
1949. Wagner, Frederick B., Jr., 800 Chauncey Road, Narbeth, Pa.
1949. Wagner, Joseph A., 201 Highland Ave., Bryn Mawr, Pa.
1938. Waldman, Joseph, 404 Meadowbrook Lane (18)
1955. Waldron, Jerome M., Evergreen Towers, 8900 Roosevelt Blvd. (19115)
1967. Waltzer, Frederick N., York & Keith Rds., Abington, Pa. (19001)
1956. Watkins, E. Lloyd, 8811 Germantown Ave. (18)
1969. Waugh, Bascom S., 1882 S. 10th St., Camden, N.J. (08104)
1967. Wear, Roland F., Jr., Campbell Soup Co., 375 Memorial Ave., Camden, N.J. (08101)
1952. Weaver, Harry S., Jr., Room 405, 1930 Chestnut St. (19103)
1969. Weibel, Robert E., 1001 Pennsylvania Ave., Havertown, Pa. (19083)
1952. Weinstein, George L., 255 S. 17th St. (3)
1950. Weiss, Sidney, 2037 Locust St. (3)
1965. Weiss, William, Philadelphia General Hospital, 34th & Curie Ave. (19104)
1959. Wellenbach, Burton L., 1930 Chestnut St. (19108)
1951. *Welty, John W., Montgomery Ave. & Owen Rd., Wynnewood, Pa.
1955. Wendkos, Martin H., Black Hawk Apts., L-16, Lancaster Ave., Dowington, Pa. (19335)
1962. Wentz, Clarkson, 20 S. Valley Road, Paoli, Pa.
1961. Wermuth, William C., 414 Minden Way, Wynnewood, Pa. (19096)
1959. West, Clifton F., Jr., 406 Lankenau Medical Bldg. (19151)
1960. Whiteley, William H., 1015 Chestnut St. (7)
1969. Whitman, Mark A., 5555 Wissahickon Ave. (19144)
1925. Widmann, Bernard P., 250 S. 18th St. (3)
1954. Wieder, Henry S., Jr., 829 Spruce St. (19107)
1939. *Willauer, George, 6129 Greene St. (44)
1969. Williams, James R., 5000 Woodland Ave. (19143)
1937. *Williams, John C., 6370 Germantown Ave. (44)
1965. Williams, Kirkley R., Bryn Mawr Bldg., Bryn Mawr, Pa. (19010)
1968. Williams, Norman, Jefferson Med. College (19107)
1950. Williams, R. G., Univ. of Pa. School of Medicine (4)
1927. Williamson, Ernest G., 6353 Woodbine Ave. (19151)
1945. Wilson, John F., 2013 Delancey Place (19103)
1949. Wilson, William W., 133 S. 36th St. (4)
1957. Winkleman, N. William, Jr., 4141 Apalogen Rd. (44)
1963. Winston, Joseph M., Jeanes Hospital (11)
1966. Wise, John S., 433 Bellevue Ave., Trenton, N.J. (08618)
1961. Wise, Robert I., 1025 Walnut St. (7)
1968. Witkowski, Joseph A., 3501 Ryan Ave. (19136)
1933. Wohl, Michael G., 1727 Pine St. (3)
1958. Woldow, Irving, Einstein Med. Center, York & Tabor Rds. (19141)
1958. Wolf, John H., 124 Walnut Lane (44)
1944. Wolf, Lewis R., 3474 Frankford Ave. (34)
1962. Wolferth, Charles C., Jr., 230 N. Broad St. (19102)
1964. Wolfson, Robert J., 3701 N. Broad St. (19140)
1964. *Wolgin, William, 1512 Spruce St. (19102)
1957. Wolkowicz, Michael I., 2022 Spruce St. (3)
1942. Wolman, Irving J., 7607 Woodlawn Ave. (26)
1966. Wood, Alfred C., Jr., 6386 Church Rd. (19151)
1932. *Wood, Francis C., 3400 Spruce St. (19104)
1944. Wood, H. Curtis, Jr., 7010 Lafayette Ave., Fort Washington, Pa.
1966. Wood, Margaret G., 3400 Spruce St. (19104)
1953. *Woodruff, Marston T., 4940 Penn St. (24)
1969. Wouters, Freerk W., Suite 713, 1530 Chestnut St. (19102)

* S. Weir Mitchell Associate

1960. Wurzel, Harold A., 3400 Spruce St. (4)
1969. Yanoff, Myron, 3400 Spruce St. (19104)
1964. Young, Alma L., 3343 W. Penn St. (19129)
1966. Young, Irving, Albert Einstein Medical Center, N.D. (19141)
1967. Zakreski, Matthew J., 8815 Germantown Ave. (19118)
1961. Zanni, Anthony L., 111 N. 49th St. (39)
1957. Zaslow, Jerry, 6735 Harbison Ave. (19149)
1955. Zatuchni, Jacob, Heart Station, PM Bldg., Episcopal Hosp. (19125)
1946. Zeigerman, Joseph H., 2105 Spruce St. (3)
1970. Zimmermann, Albert W., Jr., 635 Germantown Pike, Norristown, Pa. (19401)
1968. Zimskind, Paul D., Jefferson Med. College (19107)
1949. Zintl, William J., 1016 Warrior Rd., Drexel Hill, Pa. (19026)
1956. Ziserman, Abraham J., 2046 Pine St. (3)
1962. Zubrow, Sidney N., 829 Spruce St. (19107)
1933. Zulick, J. Donald, 307 Fisher Rd., Jenkintown, Pa. (19046)
1965. Zweiman, Burton, Univ. of Pa. Hospital (19104)

Non-Resident Fellows

ELECTED

1936. Alexander, Fay K., Lincolnville, Maine
1953. Allman, David B., 4105 Brigantine Blvd., Brigantine, N.J. (08203)
1941. Aronson, Roland S., 9401 Byeforde Road, Kensington, Md. (20795)
1971. Astley, M. Royden C., 3811 O'Hara St., Pittsburgh, Pa. (15206)
1954. Austin, George M., Loma Linda Univ. Med. Sch. Hosp., Loma Linda, Calif. (92354)
1942. Bachman, Carl, 1337 Andrea Ave., St. Helena, Cal. (93574)
1960. Bacon, Catherine L., 88 Gardiner Rd., Woods Hole, Mass. (02543)
1958. Ballinger, Walter F., II, Washington Univ. Sch. of Med., 4960 Audubon Ave., St. Louis, Mo. (63110)
1966. Baue, Arthur E., The Jewish Hosp. of St. Louis, 216 S. Kingshighway, St. Louis, Mo. (63110)
1955. Beckfield, William J., Luther Hospital, 310 Chestnut St., Eau Claire, Wisconsin
1949. *Beecham, Clayton T., Geisinger Medical Center, Danville, Pa.
1932. Behney, Charles A., P. O. Box 4256, San Jose Branch, Bisbee, Arizona (85603)
1968. Benenson, Abram S., Univ. of Kentucky College of Med., Lexington, Ky. (40506)
1955. Blank, Harvey, Jackson Memorial Hospital, Miami 36, Fla.
1921. Borzell, Francis F., R. D. 4, Box 4310, Browns Mills, N.J. (08015)
1937. Braceland, Francis J., The Institute of Living, 200 Retreat Ave., Hartford, Conn.
1936. Brown, Clark E., S. Pamet Rd., Truro, Mass. (02666)
1948. Brown, Robert B., Box 62, Kill Devil Hills, N.C. (27948)
1959. Browneller, Ellsworth R., Geisinger Medical Center, Danville, Pa.
1953. Bucher, Robert M., NIH, Bethesda, Md. (20014)
1953. Burbridge, J. Raymond, 163 Nassau St., Princeton, N.J.
1952. Bumgardner, Heath D., 13 S. Main St., Cape May Court House, N.J.
1931. Cantarow, Abraham, Bldg. 31, Rm. 10A-49, Nat'l. Cancer Institute, NIH, Bethesda, Md. (20014)
1948. Chapman, John P., Calle Fray Junipero Serra 26, Palma de Mallorca, Balearic Islands, Spain
1950. Chapple, Charles C., 8517 Indian Hills Drive, Omaha, Neb. (68114)
1941. Cheleden, John, 1012 Volusia Ave., Daytona Beach, Fla.
1930. Clarke, Francis Mann, 116 New St., New Brunswick, N.J.
1926. Clerf, Louis H., 5575-8th Ave., North St., Petersburg, Fla.
1964. Cohen, Sheldon G., 309 S. Franklin St., Wilkes-Barre, Pa.
1969. Collins, James A., Geisinger Med. Center, Danville, Pa. (17821)
1959. Cowan, John S., AMA Med. Educational Project, APO San Francisco (96243)

* S. Weir Mitchell Associate

1960. Cowley, Allen W., Sr., 1919 N. Front St., Harrisburg, Pa.
1967. Cox, J. William, 2906 N. Kensington St., Arlington, Va. (22207)
1937. Crane, Martin P., 310 E. 16th St., Ocean City, N.J. (08226)
1941. Cuttle, Tracy D., % Dr. George N. Hosford, 1080 Chestnut St., San Francisco, Calif. (94109)
1959. Dannenberg, Arthur M., Jr., Johns Hopkins School of Hygiene, 615 N. Wolfe St., Baltimore, Md. (21205)
1937. Davis, Perk Lee, 419 S.E. Third St., Deerfield Beach, Florida (33441)
1947. Dehne, Theodore L., Lake Paupac Club, Greentown, Pa. (18426)
1954. Deitrick, John E., 69 Rockledge Rd., Bronxville, N.Y. (10708)
1965. Delaney, William E., III, St. Vincent's Hosp., 170 W. 12th St., N.Y.C. (10011)
1968. Denton, Robert, Beth Israel Hosp., 330 Brookline Ave., Boston, Mass. (02215)
1941. Dixon, Harold M., R.D. #3, Cool Springs Rd., Indiana, Pa. (15701)
1961. Duane, Thomas D., Bedminster, Pa. (18910)
1959. Durgin, Bernice Elise, 221 N. Allegheny St., Bellefont, Pa.
1947. Durkin, John K., V.A. Hospital, Coatesville, Pa. (19320)
1955. Edwards, Margaret Hay, 800 4th St., S.W., Washington, D.C. (20024)
1953. Eisenberg, Isadore J., 2806 Green St., Harrisburg, Pa.
1951. Ellis, Mackinnon, Kelkinny, RFD #4, Jonesboro, Tenn. (37659)
1957.**Errion, Arthur Robbins, U. S. Naval Hospital, Chelsea, Mass. (02150)
1951. Ervin, Carl E., 1525 Cedar Cliff Dr., Camp Hill, Pa. (17011)
1944. Estes, W. L., Jr., 1726 N. Main St., Bethlehem, Pa. (18018)
1952. Faller, Constantine P., 127 State St., Harrisburg, Pa.
1952. Flinn, Lewis B., 1306 Broom St., Wilmington, Del. (19806)
1940. Forrester, James S., Harrisburg Polyclinic Hospital, Harrisburg, Pa.
1968. Frankl, William S., 121 Cornell Lane, St. Davids, Pa. (19087)
1940. Fry, Kenneth E., 621 University St., Walla Walla, Washington (99362)
1947. Gaskill, Herbert S., 4800 Hale Parkway, Denver, Colo. (80220)
1931. Gilman, Robert Louis, Cheyney, Pa.
1968. Glenney, Wilton R., 218 W. Market St., Pottsville, Pa. (17901)
1954. Godfrey, Ellwood W., Princeton Hospital, Princeton, N.J.
1928. Gordon, Burgess L., 1550 Lake Shore Dr., Chicago, Illinois
1952. Grieco, Reynold M., 2 W. 4th St., Williamsport, Pa.
1934. Griffith, John Q., Jr., 6 North Fredericksburg Ave., Margate, N.J.
1952. Gross, Elmer R., 1102 West St., Wilmington, Del. (19801)
1933. Gruber, Charles M., 1313 College Ave., Redlands, Calif.
1951. Hafkenschiel, Joseph H., Jr., 380 Golden Oak Drive, Portola Valley, Calif. (94025)
1935. Haines, Harlan F., 231 N. Pine St., Seaford, Del.
1939. Hamblock, Leonard C., Box 185, Rd. #2, North East, Md. (20901)
1959. Hampton, Louis J., 300 Highland Ave., Hanover, Pa. (17331)
1969. Hanson, Stephen M., Coatesville Hosp., Coatesville, Pa. (19320)
1969. Harrell, George T., Jr., 500 University Dr., Hershey, Pa. (17033)
1966. Harrington, Edwin D., 720 Stanwick Rd., Moorestown, N.J. (18057)
1955. Harris, John H., 1301-A N. Second St., Harrisburg, Pa.
1965. Harris, John H., Jr., Carlisle Hospital, Carlisle, Pa. (17013)
1936. Hatch, Lerleen Clement, 7546 E. Mariposa Dr., Scottsdale, Ariz. (85251)
1928. Hayman, Joseph M., Jr., 3504 E. Scarborough Rd., Cleveland Hts., Ohio (44118)
1964. Heath, Robert D., The Geisinger Med. Center, Danville, Pa. (17821)
1946. Hendrickson, Frank O., 108 Norfolk Rd., Jupiter, Florida (33458)
1955. Hills, Arthur G., 1000 N. W. 17th St., Miami, Fla. (36)
1933. Hitzrot, Lewis H., 161 Patton Ave., Princeton, N.J. (08540)
1910. Horn, Robert C., Henry Ford Hospital, Detroit, Mich.
1953. Imber, Irving, 428 Walnut St., Reading, Pa.
1958. Impink, Robert R., 405 Oley St., Reading, Pa.
1935. Ingleby, Helen, The Church House, Heacham, King's Lynn, England
1921. *Ivy, Robert H., 104 Dalton Rd., Paoli, Pa.

** Military Service
* S. Weir Mitchell Associate

1952. Jonas, Karl C., 916 19th St., N.W., Washington, D.C. (20006)
1955. Jordan, Claus G., 175 E. Brown St., E. Stroudsburg, Pa.
1936. Kain, Thomas M., 30 Northeast 97th St., Miami, Fla.
1957. Kane, Sydney H., 88 Valley Rd., Berkeley Hts., N.J. (07922)
1956. Keffer, William H., 413 Oley St., Reading, Pa.
1947. Kelchner, Clyde H., 1125 Turner St., Allentown, Pa.
1965. Kennedy, Charles, 5115 Allan Terrace, Bethesda, Md. (20016)
1969. *Kitchen, James G., II, The Mohican, Pocono Lake, Pa. (18347)
1954. LaMotte, William O., Jr., 1303 Delaware Ave., Wilmington, Del. (19806)
1963. Lang, Leonard P., Memorial Div., Wilmington Med. Center, PO Box 1548, Wilmington, Del. (19899)
1936. Leaman, William G., Jr., P. O. Box 463, Unionville, Pa. (19375)
1943. Leopold, Irving H., The Mount Sinai Hospital, 100th St. & 5th Ave., New York, N.Y. (10029)
1952. Levan, John B., 401 Oley St., Reading, Pa.
1960. Lewis, David H., Torild Wulffsgatan 37, 413 19 Goteborg, Sweden
1949. Lhamon, William T., The New York Hospital, 525 E. 68th St., New York, N.Y. (10021)
1954. Light, John J. B., 25 N. 9th St., Lebanon, Pa.
1954. Lindenmuth, Woodrow W., Yale-New Haven Hosp., PO Box 1001, New Haven, Conn. (06504)
1948. Livingood, Clarence S., Henry Ford Hospital, Detroit 2, Mich.
1932. *Lukens, Francis D. W., Veterans Administration Hospital, University Drive, Pittsburgh, Pa. (15240)
1965. McCarty, Daniel J., Jr., University of Chicago, Chicago, Ill. (60637)
1948. McLaughlin, John T., 655 N. Central Ave., Glendale, Calif.
1950. Mackmull, Gulden, 174 Nob Hill Lane, Ventura, Calif. (93003)
1942. Manges, Lewis C., Jr., R. D. 2, Windsor, N.Y. (13865)
1959. Maniglia, Rosario, Holy Spirit Hospital, Camp Hill, Pa.
1953. Margolies, Michael, 567 E. Chestnut St., Coatesville, Pa.
1955. Margolies, M. Price, 379 E. Chestnut St., Coatesville, Pa.
1935. Mason, James B., 1730 S. Jackson St., Tacoma, Washington
1939. May, Hans, P. O. Box 1477, Christiansted St. Croix, U.S. Virgin Is. (00820)
1932. Meade, Richard H., Jr., 750 San Jose Dr., Grand Rapids, Mich.
1936. Middleton, William Shainline, 2114 Adams St., Madison, Wisc.
1946. Miller, Franklin R., Snyder-Jones Clinic, First Nat. Bk. Bldg., Winfield, Kansas
1949. Motley, Hurley L., 1212 Shatto St., Los Angeles, Calif.
1958. Nealon, Thomas F., Jr., St. Vincent's Hosp. & Med. Center, 170 W. 12th St., N.Y., N.Y. (10011)
1960. Ojers, Gaylord W., 35 E. Elizabeth Ave., Bethlehem, Pa.
1956. Oppenheimer, Albert, 224 E. Main St., Moorestown, N.J.
1926. Paul, John Rodman, 333 Cedar St., New Haven, Conn.
1959. Pendergrass, Henry P., Massachusetts General Hospital, Boston, Mass.
1950. Pincus, Irwin J., 610 N. Roxbury Drive, Beverly Hills, Calif.
1958. Rachlin, Lillian, 370 Golden Oak Drive, Portola Valley, Calif. (94026)
1966. Rahn, Elsa Kertesz, 363 Hempstead Ave., Rockville Center, N.Y. (11570)
1938. Read, Hilton S., 5407 Atlantic Ave., Atlantic City, N.J.
1964. Reed, Miriam, 253 Witherspoon St., Princeton, N.J.
1958. Reinhardt, David J., III, 400 Bay Ave., Lewes, Del. (19958)
1936. Reisinger, John A., 1935 Eye St., N.W., Washington, D.C.
1955. Rettew, Philip L., 612 Museum Rd., Reading, Pa.
1951. Richardson, Fred MacD., South Side, Route 23, Claverack, N.Y. (12513)
1961. Richardson, Herschell E., 205 Mayerline St., Houston, Texas
1947. Rogers, Arthur Merriam, 1351 Durwood Drive, Charlotte, N.C.
1965. Rowe, Daniel S., 20 Horseshoe Lane, Madison, Conn. (06443)
1941. Royster, Hubert A., Jr., Watts Hospital, Durham, N.C. (27705)
1954. Sampson, Martin C., Wallace Laboratories, Cranbury, N.J.

* S. Weir Mitchell Associate

1936. Sands, Joseph Evans, 135 107th St., Stone Harbor, N.J.
1945. Schell, James F., 506 Sharpley Lane, Wilmington, Del.
1958. Schreck, Kenneth M., 1403 Dauphin Ave., Wyomissing, Pa. (19610)
1963. Schumacher, L. Richard, 14 B Memorial Dr., Doylestown, Pa. (18901)
1951. Seitchik, Joseph, Sinai Hospital of Baltimore, Baltimore, Md.
1941. Shanks, Alfred R., Jr., Alfred I. duPont Institute, P.O. Box 269, Wilmington, Del. (19899)
1964. Sharpe, William D., Martland Hosp., 65 Bergen St., Newark, N.J.
1950. Shiffer, Paul H., Dreher Ave., Rd. 5, Box 5, Stroudsburg, Pa. (18360)
1964. Shimkin, Michael B., Dept. Community Med., Univ. of Calif. Med. Sch., La Jolla, Calif. (92037)
1951. Shorey, Winston K., 7117 Shamrock Drive, Little Rock, Arkansas
1933. Smelzer, Donald C., 207 E. Orange St., Lancaster, Pa.
1954. Smith, Charles W., 128 State St., Harrisburg, Pa.
1955. Smith, J. Winslow, 824 Coventry Drive, Boca Raton, Florida (33432)
1952. Steiger, William A., 1732 Sir William Osler Drive, Virginia Beach, Virginia (23454)
1942. Stengel, Alfred, Jr., Maple Ave., Katonah, N.Y.
1955. Stevenson, Theodore D., R.D. 1, Box 201 P, Swannanoa, N.C. (28778)
1931. Stiles, Merritt, H., E. 406 14th Ave., Spokane 3, Wash.
1953. Stroud, M. W., Shaker Blvd., Shagrin Falls, Ohio (44022)
1934. Summey, Thomas J., Morrowdale Farm, Rt. 2, Charlottesville, Pa.
1961. Sunderman, F. William, Jr., Univ. of Conn. Sch. Med., Dept. Laboratory Med., Drawer B, Newington, Conn. (06111)
1952. Sweeney, Francis X., Station A, Marlboro, N.J. (07746)
1931. Taylor, Norman H., Queen of the East, E. Broadway, Hamilton, Bermuda
1965. Taylor, Richard C., Reddington Fairview Hosp., Skowhegan, Maine (04976)
1928. Thomas, J. Earl, Loma Linda University, Loma Linda, Calif.
1942. Thompson, Wesley D., 247 E. 3rd St., Lewistown, Pa.
1941. Tompkins, Pendleton, Suite 202, 101 S. San Mateo Dr., San Mateo, Calif. (94401)
1954. Turner, Linton W., 16 Bay Road, Ocean City, N.J. (08226)
1897. Veasey, Clarence A., 1118 W. 9th Ave., Spokane 9, Wash.
1941. Weaver, Ruth H., 108 Atlantic Ave., Atlantic City, N.J.
1957. Webster, Marie, 1623 Hyde St., San Francisco 9, California
1966. Wentzler, J. Donald, R.D. #2, Muncy, Pa. (17756)
1959. Whayne, Tom F., University of Kentucky Medical Center, Lexington, Ky.
1966. White, Richard K., 1702 Walnut St., Allentown, Pa. (18104)
1936. Wilder, Theodore S., Linden Lane, Sherborn, Mass.
1935. Willard, John H., R.D. #1, Box 95, Sanibel, Fla. (33957)
1949. Willson, J. Robert, University of Michigan Medical Center, Ann Arbor, Michigan (48104)
1948. Winston, Julius, 1616 Pacific Ave., Atlantic City, N.J. (08400)
1963. Wood, Horatio C., IV, 2820 Vernon Place, Cincinnati, O. (45219)
1941. Young, Barton R., 2324 Bath St., Santa Barbara, Calif. (93105)
1953. Zarafonetis, Chris J. D., Simpson Memorial Institute, University of Michigan, Ann Arbor, Michigan

Honorary Fellows

Limited to fifty, of whom twenty may be foreigners.

American

ELECTED

1967. Bell, Whitfield J., Jr., ph.d., litt.(hon.), ll.d.(hon.), American Philosophical Society, Independence Square (19106)
1964. Corner, George Washington, m.d., sc.d.(hon.), ll.d(hon.), litt.d.(hon.), 1810 Rittenhouse Square (3)
1959. Fay, Marion S., ma., ph.d., sc.d.(hon.), ll.d.(hon.), Women's Medical College, Henry Ave. & Abbottsford Rd. (29)

1965. Gurin, Samuel, ph.d., sc.d.(hon.), University of Pennsylvania School of Medicine, 36th and Hamilton Walk (19104)

1958. *Shryock, Richard H., ph.d., ll.d.(hon.), American Philosophical Society, Independence Square (6)

Foreign

1955. Mann, Ida, m.a., d.sc., m.b., b.s., l.r.c.p., d.o.m.s., f.r.c.s., Ophthalmic Consultant to the Government of W. Australia, 56 Hobbs St., Nedlands, Perth, W. Australia.

Honorary Associate Fellows

1955. Diemand, John A., President, Insurance Company of North America, 1600 Arch St. (2)

1964. Pew, J. Howard, Grays Lane & Mill Creek Rd., Ardmore, Pa.

1967. Rosenwald, Lessing, J., 1146 Fox Chase Rd., Jenkintown, Pa. (19046)

1967. Wintersteen, Mrs. John, 1425 Mt. Pleasant Rd., Villanova, Pa. (19085)

Necrological List

Resident Fellows	*Date of Election*	*Date of Death*
Beardwood, Joseph T., Jr.	May 12, 1930	April 11, 1970
Bortz, Edward LeRoy	January 12, 1931	February 24, 1970
Branen, William T.	January 7, 1942	March 7, 1970
Carpenter, Chapin	May 12, 1930	May 11, 1970
Catenacci, Alfred J.	April 7, 1954	April 1, 1970
Cooper, David A.	May 12, 1930	July 6, 1970
Cornelius, Chalmers E.	March 5, 1941	November 25, 1970
Dyer, W. Wallace	May 6, 1942	September 14, 1970
Freiman, Henry D.	April 3, 1963	August 17, 1970
Greenspan, Benjamin	October 1, 1958	October 25, 1970
Hartmann, Frederick L.	January 11, 1926	December 29, 1970
Kasper, Kelvin A.	October 12, 1938	January 10, 1971
Klein, Thomas	October 7, 1920	April 18, 1970
Kobler, Henry B.	October 3, 1945	June 2, 1970
Levering, J. Walter	January 9, 1933	October 26, 1970
McPhedran, F. Maurice	October 1, 1924	November 29, 1970
Morris, Harold H.	April 5, 1944	December 17, 1970
Prince, Leon N.	January 6, 1954	January 27, 1970
Rupp, Charles	January 9, 1946	September 1, 1970
Scarano, Joseph A.	January 7, 1948	January 28, 1970
Schaeffer, J. Parsons	January 3, 1917	February 7, 1970
Somerville, William J.	April 19, 1950	March 4, 1970
Stauffer, Herbert M.	October 7, 1952	December 18, 1970
Tsaltas, Theodore T.	May 19, 1965	August 15, 1970
Wohl, Michael G.	May 8, 1933	June 20, 1970

Non-Resident Fellows	*Date of Election*	*Date of Death*
McGregor, Robert A.	May 16, 1962	August 7, 1969
Schumann, Edward A.	October 5, 1921	October 18, 1970

(Suggested Form of Bequest)

I hereby give, devise, and bequeath to The College of Physicians of Philadelphia, a charitable educational association organized under the laws of the Commonwealth of Pennsylvania and the executive offices whereof are located in the City of Philadelphia, the sum of.....

a. which sum shall be used for the general purpose of said association;

b. which sum shall be added to and become a part of the general endowment fund of said association;

c. which sum shall be used by said association preferably for the following purposes:

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of

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